Professional Pentaplex DVR

Digital Video Recorder

User's Manual

WARNING

RISK OF ELECTRIC SHOCK
DO NOT OPEN

WARNING: TO REDUCE THE RISK OF ELECTRIC SHOCK,
DO NOT REMOVE COVER (OR BACK).
NO USER-SERVICEABLE PARTS INSIDE.
REFER SERVICING TO QUALIFIED
SERVICE PERSONNEL.

The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated “dangerous voltage” within the product’s enclosure that may be of sufficient magnitude to constitute a risk of electric shock.

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and Maintenance (servicing) instructions in the literature accompanying the appliance.

COMPLIANCE NOTICE OF FCC:

THIS EQUIPMENT HAS BEEN TESTED AND FOUND TO COMPLY WITH THE LIMITS FOR A CLASS A DIGITAL DEVICE, PURSUANT TO PART 15 OF THE FCC RULES. THESE LIMITS ARE DESIGNED TO PROVIDE REASONABLE PROTECTION AGAINST HARMFUL INTERFERENCE WHEN THE EQUIPMENT IS OPERATED IN A COMMERCIAL ENVIRONMENT. THIS EQUIPMENT GENERATES, USES, AND CAN RADIATE RADIO FREQUENCY ENERGEY AND IF NOT INSTALLED AND USED IN ACCORDANCE WITH THE INSTRUCTION MANUAL, MAY CAUSE HARMFUL INTERFERENCE TO RADIO COMMUNICATIONS. OPERATION OF THIS EQUIPMENT IN A RESIDENTIAL AREA IS LIKELY TO CAUSE HARMFUL INTERFERENCE, IN WHICH CASE USERS WILL BE REQUIRED TO CORRECT THE INTERFERENCE AT THEIR OWN EXPENSE.

CAUTION: CHANGES OR MODIFICATIONS NOT EXPRESSLY APPROVED BY THE PARTY RESPONSIBLE FOR COMPLIANCE COULD VOID THE USER’S AUTHORITY TO OPERATE THE EQUIPMENT.

THIS CLASS OF DIGITAL APPARATUS MEETS ALL REQUIREMENTS OF THE CANADIAN INTERFERENCE-CAUSING EQUIPMENT REGULATIONS.

The information in this manual is believed to be accurate as of the date of publication. The information contained herein is subject to change without notice. Revisions or new editions to this publication may be issued to incorporate such changes.

Important Safeguards

1. Read Instructions
All the safety and operating instructions should be read before the appliance is operated.

2. Retain Instructions
The safety and operating instructions should be retained for future reference.

3. Cleaning
Unplug this equipment from the wall outlet before cleaning it. Do not Use liquid aerosol cleaners. Use a damp soft cloth for cleaning.

4. Attachments
Never add any attachments and/or equipment without the approval of The manufacturer as such additions may result in the risk of fire, electric shock or other personal injury.

5. Water and/or Moisture
Do not use this equipment near water or in contact with water.

6. Accessories
Do not place this equipment on an unstable cart, stand or table. The equipment may fall, causing serious injury to a child or adult, and serious damage to the equipment. Wall or shelf mounting should follow the manufacturer's instructions, and should use a mounting kit approved by the manufacturer.

7. Power Sources
This equipment should be operated only from the type of power source Indicated on the marking label. If you are not sure of the type of power, please consult your equipment dealer or local power company.

8. Power Cords
Operator or installer must remove power and TNT connections before handling the equipment.

9. Lightning
For added protection for this equipment during a lightning storm, or when it is left unattended and unused for long periods of time, unplug it from the wall outlet and disconnect the antenna or cable system. This will prevent damage to the equipment due to lightning and power-line surges.

10. Overloading
Do not overload wall outlets and extension cords as this can result in the risk of fire or electric shock.

11. Objects and Liquids
Never push objects of any kind through openings of this equipment as They may touch dangerous voltage points or short out parts that could Result in a fire or electric shock. Never spill liquid of any kind on the Equipment.

12. Servicing
Do not attempt to service this equipment yourself. Refer all servicing to qualified service personnel.

13. Damage requiring Service
Unplug this equipment from the wall outlet and refer servicing to qualified service personnel under the following conditions:
A. When the power-supply cord or the plug has been damaged.
B. If liquid is spilled, or objects have fallen into the equipment.
C. If the equipment has been exposed to rain or water.
D. If the equipment does not operate normally by following the operating instructions, adjust only those controls that are covered by the operating instructions as an improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the equipment to its normal operation.
E. If the equipment has been dropped, or the cabinet damaged.
F. When the equipment exhibits a distinct change in performance — this indicates a need for service.

14. Replacement Parts
When replacement parts are required, be sure the service technician has used replacement parts specified by the manufacturer or that have the same characteristics as the original part. Unauthorized substitutions may result in fire, electric shock or other hazards.

15. Safety Check
Upon completion of any service or repairs to this equipment, ask the service technician to perform safety checks to determine that the equipment is in proper operating condition.

16. Field Installation
This installation should be made by a qualified service person and should conform to all local codes.

17. Correct Batteries
Warning: Risk of explosion if battery is replaced by an incorrect type. Dispose of used batteries according to the instructions.

18. Tmra
A manufacturer's maximum recommended ambient temperature (Tmra) for the equipment must be specified so that the customer and installer may determine a suitable maximum operating environment for the equipment.

19. Elevated Operating Ambient Temperature
If installed in a closed or multi-unit rack assembly, the operating ambient temperature of the rack environment may be greater than room ambient. Therefore, consideration should be given to installing the equipment in an environment compatible with the manufacturer's maximum rated ambient temperature (Tmra).

20. Reduced Air Flow
Installation of the equipment in the rack should be such that the amount of airflow required for safe operation of the equipment is not compromised.

21. Mechanical Loading
Mounting of the equipment in the rack should be such that a hazardous condition is not caused by uneven mechanical loading.

22. Circuit Overloading
Consideration should be given to connection of the equipment to supply circuit and the effect that overloading of circuits might have on over current protection and supply wiring. Appropriate consideration of equipment nameplate ratings should be used when addressing this concern.

23. Reliable Earthing (Grounding)
Reliable grounding of rack mounted equipment should be maintained. Particular attention should be given to supply connections other than direct conections to the branch circuit (e.g., use of power strips).

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Chapter 1 — Introduction

1.1 Features

Your color digital video recorder (DVR) provides recording capabilities for four, eight or 16 camera inputs. It provides exceptional picture quality in both live and playback modes, and offers the following features:

- 4, 8 or 16 Composite Input Connectors
- Compatible with Color (NTSC or PAL) and B&W (CCIR and EIA) Video Sources
- Multiple Search Engines (Date/Time, Calendar, Event)
- Records up to 240 NTSC Frames per Second (200 PAL Frames per Second)
- “Loop-Through” Video Connectors
- Continuous Recording in Disk Overwrite Mode
- Continuous Recording while Archiving, Transmitting to Remote Site and during Playback
- User-friendly Graphical User Interface (GUI) Menu System
- Various Recording Modes (Manual / Schedule / Event)
- Audio Recording and Playback
- Alarm Connections Include: Input, Output.
- Built-in Alarm Buzzer
- Live or Recorded Video Access via Ethernet or Modem

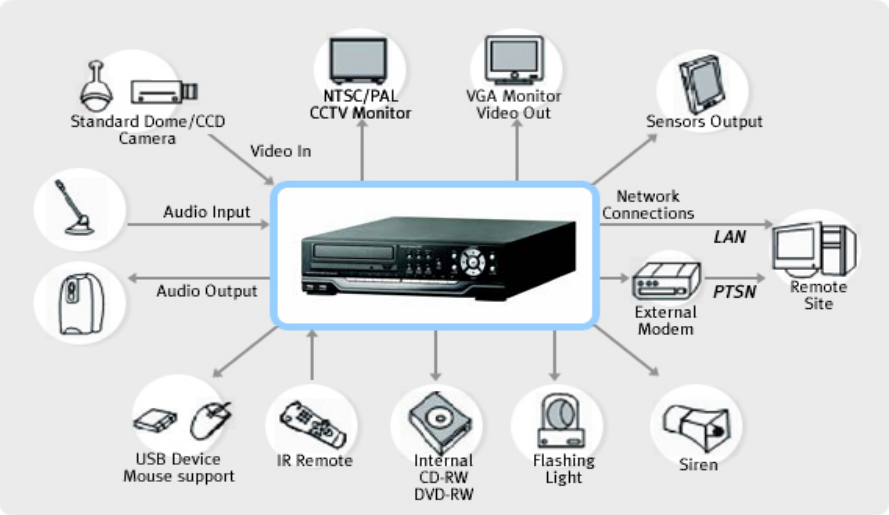


Figure 1 – Typical DVR installation.

1.2 Technical Overview

Your DVR can replace both a time-lapse VCR and a multiplexer in a security installation. However, it has many features that make it much more powerful and easier to use than even the most advanced VCR.

The DVR converts analog NTSC or PAL video to digital images and records them on a hard disk drive. Using a hard disk drive allows you to access recorded video almost instantaneously; there is no need to rewind tape. The technology also allows you to view recorded video while the DVR continues recording video.

Digitally recorded video has several advantages over analog video recorded on tape. There is no need to adjust tracking. You can freeze frames, fast forward, fast reverse, slow forward and slow reverse without image streaking or tearing. Digital video can be indexed by time or events, and you can instantly view video after selecting the time or Event.

Your DVR can be set up for event or time-lapse recording. You can define times to record and the schedule can be changed for day, night, weekend and user defined holidays.

The DVR can be set up to alert you when the hard disk drive is full, or it can be set up to record over the oldest video once the disk is full.

Your DVR uses a proprietary encryption scheme making it nearly impossible to alter video.

You can view video and control your DVR remotely by connecting via modem or Ethernet. There are two USB ports that can be used to back up the video clip file to external hard disk drives (or memory sticks) and/or can be connected to the USB mouse.

NOTE: This manual covers the 4-, 8- 16-channel digital video recorders. The DVRs are identical except for the number of cameras and alarms that can be connected and the number of cameras that can be displayed. For simplicity, the illustrations and descriptions in this manual refer to the 16-camera model.

Chapter 2 — Digital Video Recorder Layout

NOTE: Your DVR should be completely installed before proceeding. Refer to Chapter 3 — Installation.

2.1 Front Panel Layout

(1) 8, 16 Channel DVR

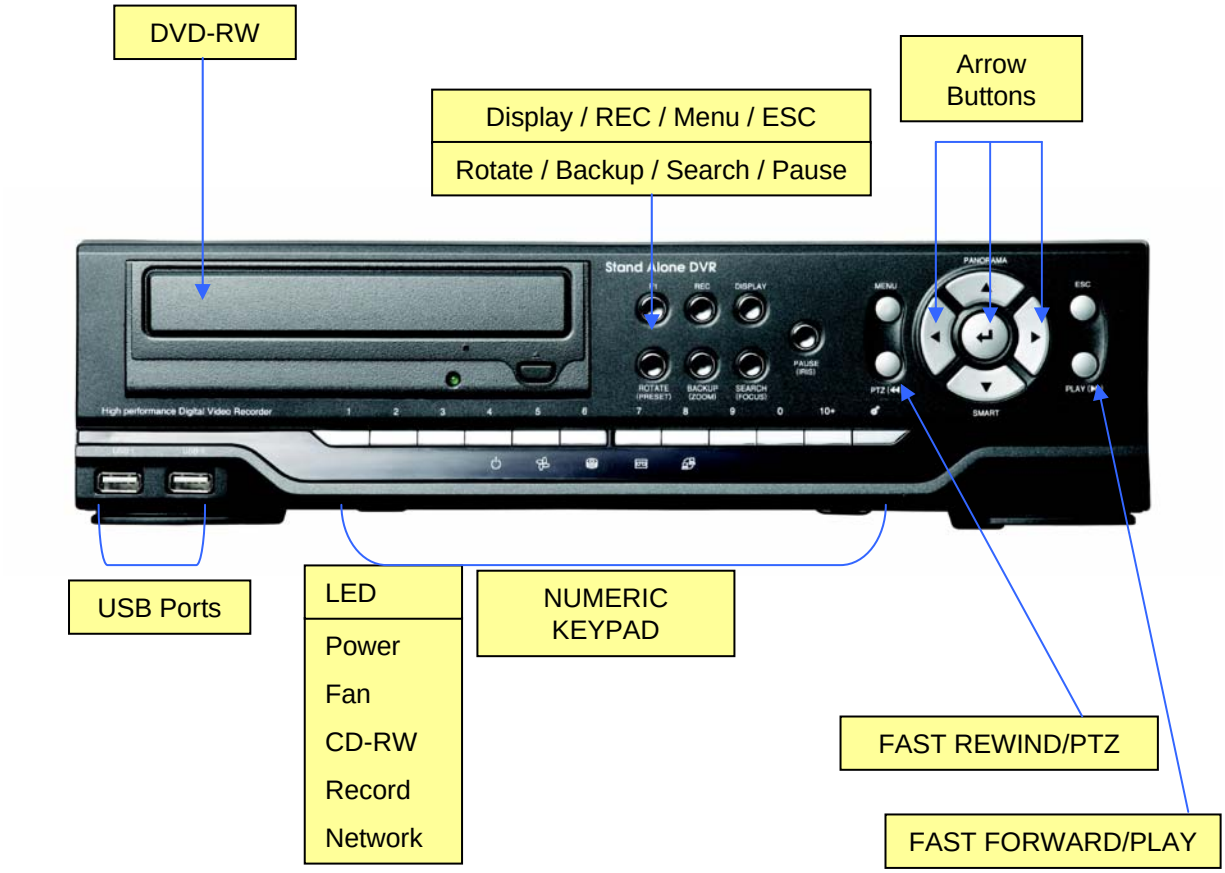


Figure 2.1 — 8, 16-Channel DVR front panel.

(2) 4Channel DVR

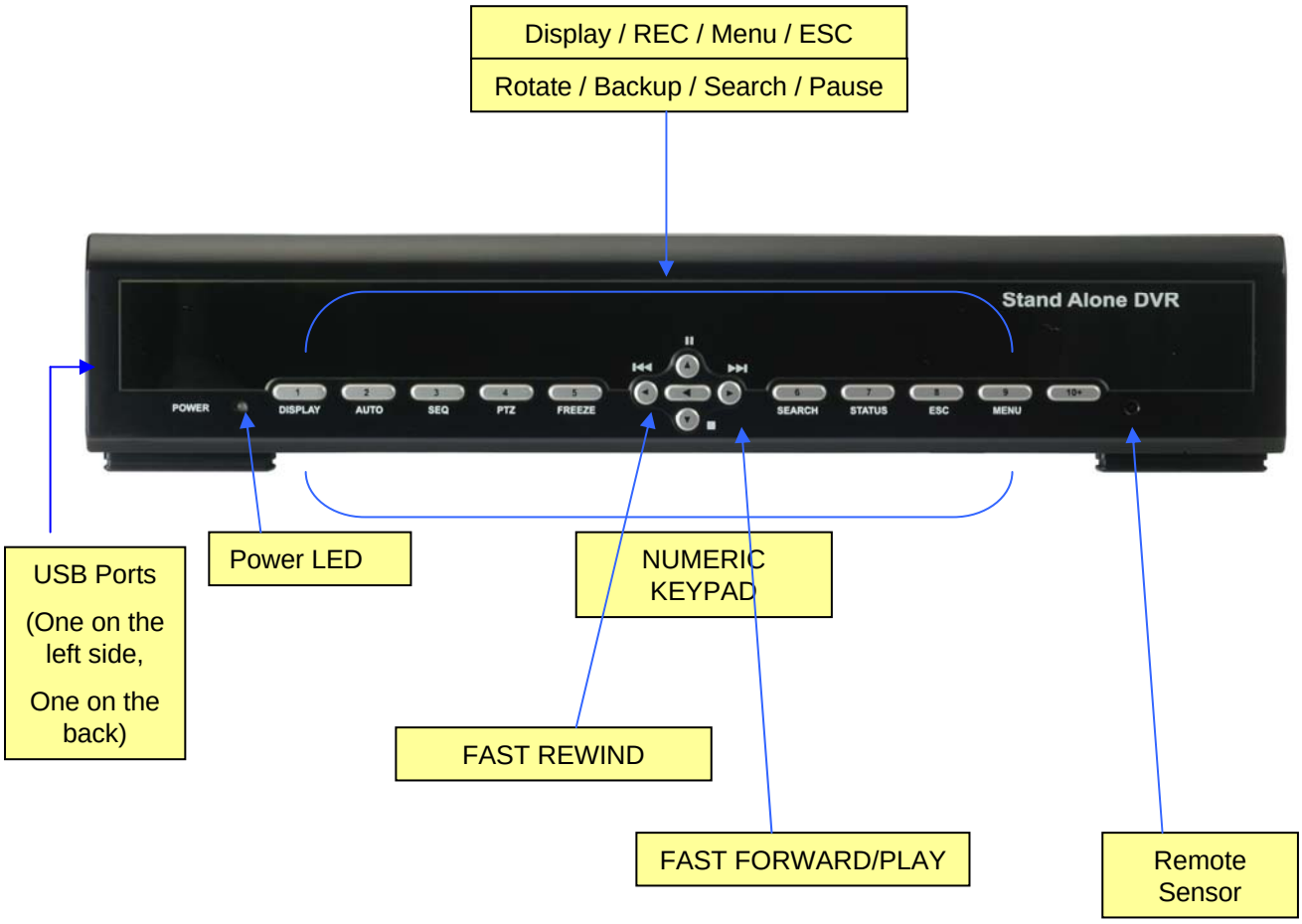


Figure2.2 — 4-Channel DVR front panel.

The front panel looks and operates much like a VCR combined with a multiplexer. Many of the buttons have multiple functions. The following describes each button and control. Take a few minutes to review the descriptions. You will use these to initially set up your DVR and for daily operations.

DISPLAY Button

Pressing the DISPLAY button toggles between different display formats.

REC Button

When pressing the INSTANT RECORDING button in the live mode, your DVR will start instant recording and you will be asked to confirm the instant recording.

MENU Button

Pressing the MENU button enters into the Setup screen. You will need to enter the administrator password to access the Setup. Pressing the button also closes the current menu or setup dialog box.

ESC Button

Pressing the ESC button exits the menu screens or moves to the upper menu.

ROTATE Button (Preset)

When in the live mode, pressing the ROTATE button displays another screen whenever you press this button manually. Also, this button is used to control presets in the PTZ mode.

BACKUP Button (Zoom)

Pressing the BACKUP button displays the Backup menu. Pressing this button again will exit the Backup menu. This button is also used for the Cut & Save hot key. Refer to the Appendix C. Also, this button is used to control zoom in the PTZ mode.

SEARCH Button (Focus)

Pressing the SEARCH button displays the Search menu. Pressing this button again will exit the Search menu. This operation is user password protected. Also, this button is used to control focus in the PTZ mode.

PAUSE Button (Iris)

Pressing the PAUSE button in the playback mode will pause the video. Pressing this button again will exit from the Pause mode. Also, this button is used to control iris in the PTZ mode.

UP, DOWN, LEFT, RIGHT Arrow Buttons

These buttons are used to navigate through menus and GUI. They are also used to control Pan and Tilt when in the PTZ mode. The arrow buttons can be used to move the position of the active cameo screen. These buttons also have the following functions.
▲ Button: Panorama playback in the Playback mode and tilting the camera up in the PTZ mode.
▼ Button: Smart playback in the Playback mode and tilting the camera down in the PTZ mode.
◀ Button: Backward playback at regular speed in the Playback mode and Backward playback frame by frame when pressing this button in the PAUSE mode. Pan the camera left in the PTZ mode.
▶ Button: Forward playback at regular speed in the playback mode and Forward playback frame by frame when pressing this button in the PAUSE mode. Pan the camera right in the PTZ mode.

ENTER Button

The Enter button selects a highlighted item or completes an entry that you have made.

REWIND (PTZ) Button

Pressing the RW button plays video backward at high speed. Pressing the button again toggles the playback speed from ◀◀, ◀◀◀, ◀◀◀◀ and ◀◀◀◀◀ and the screen displays ◀◀, ◀◀◀, ◀◀◀◀ and ◀◀◀◀◀ respectively. Used for zooming out in the PTZ mode. Pressing this button in the Pause mode plays video backward at slow speed. Pressing the button again toggles the playback speed from 1/2, 1/4, 1/8 and 1/16. When pressing this button, you can enter into the PTZ mode.

FAST FORWARD (Play) Button

Pressing the FF button plays video forward at high speed. Pressing the button again toggles the playback speed from ▶▶, ▶▶▶, ▶▶▶▶ and ▶▶▶▶▶ and the screen displays ▶▶, ▶▶▶, ▶▶▶▶ and ▶▶▶▶▶ respectively. Used for zooming in in the PTZ mode. Pressing this button in the Pause mode plays video forward at slow speed. Pressing the button again toggles the playback speed from 1/2, 1/4, 1/8 and 1/16. When pressing this button, your DVR will play back the latest recording data.

NUMBER Buttons (0 ~ 9, +10)

Pressing the individual camera buttons will cause the selected camera to display full screen. They are also used to enter passwords. Use the +10 button to select bigger numbers than 10. (For example, +10 + 6 = 16).

LOG OUT Button

Pressing the LOG OUT button exits the menu screen and you have to enter the password again to enter to the Setup menu.

Front LED Display

POWER LED:

The POWER LED lights when the DVR is turned on.

FAN LED:

The FAN LED lights when the fan is working.

CD-RW LED:

The CD-RW LED lights when the CR-RW is being used.

REC LED:

The REC LED lights when the DVR is recording.

NET LED:

The NET LED lights when the DVR is connected to Network.

2.2 Rear Panel Layout

(1) 8, 16Channel DVR

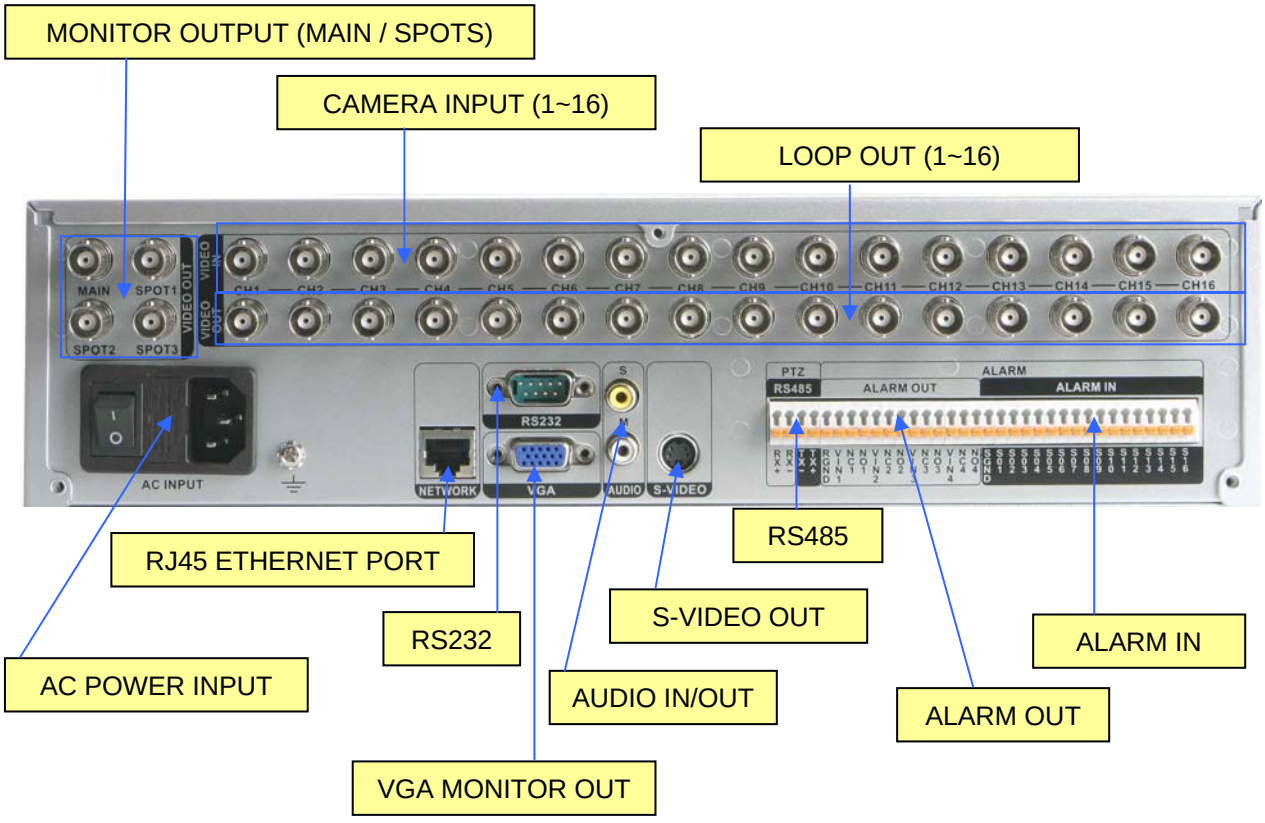


Figure 3.1 – 16-channel DVR rear panel (8-channel is similar)

(2) 4Channel DVR

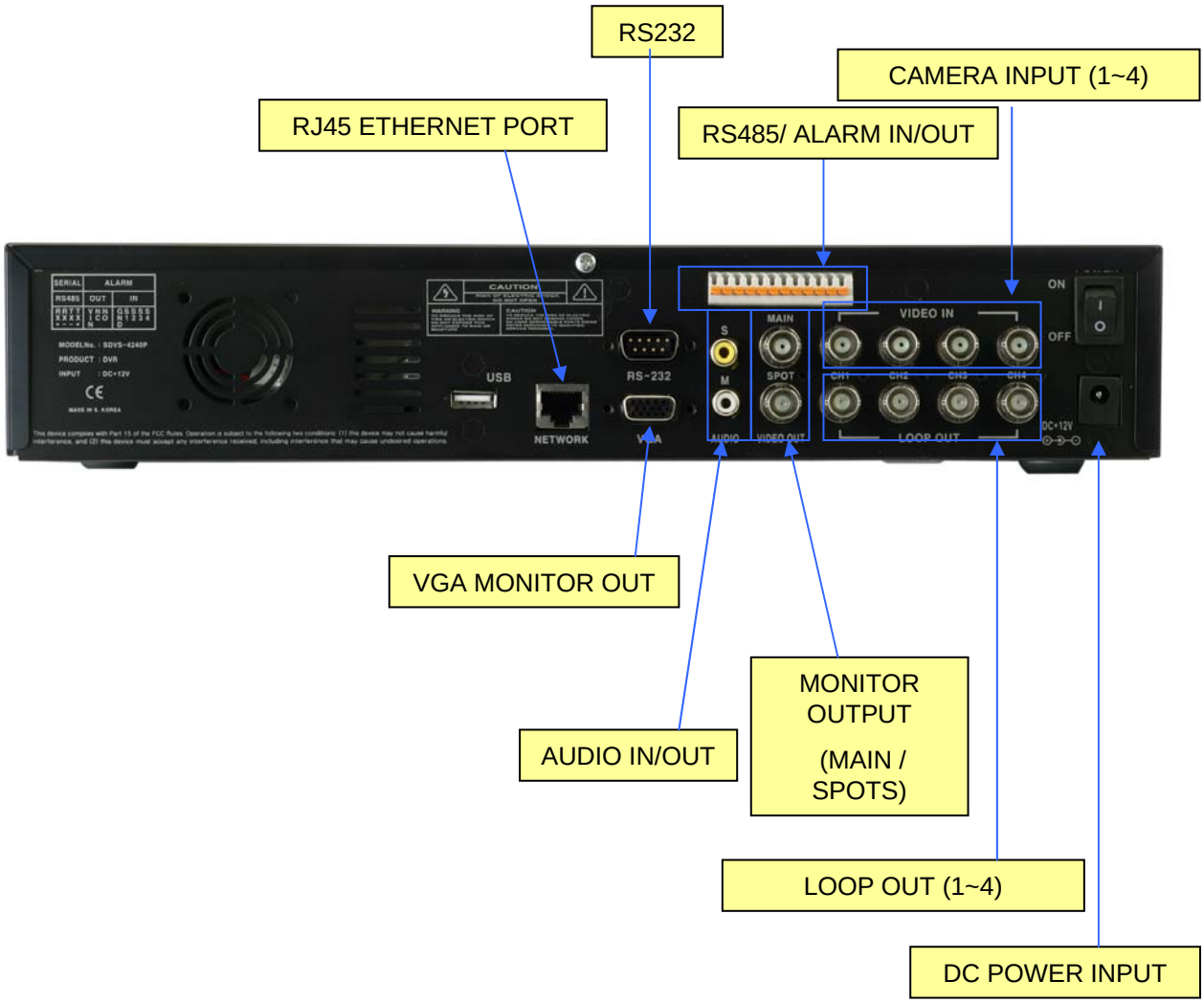


Figure 3.2 – 4-channel DVR rear panel.

2.3 IR Remote Controller

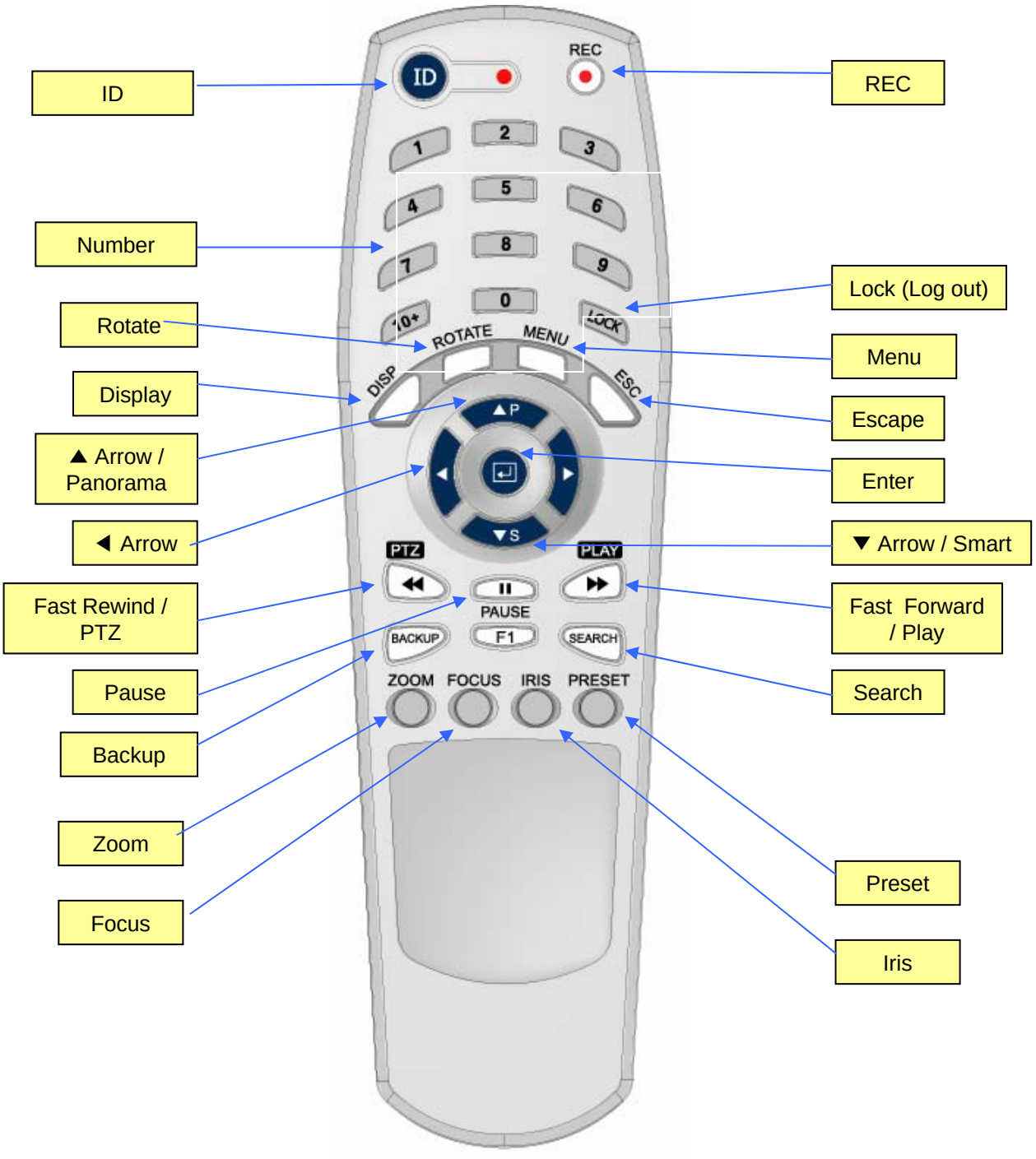


Figure 4 – IR Remote Controller.

(In case of 4ch, IR remote controller has different color and shape.)

Chapter 3. Installation

3.1 Connecting the Video Source

Figure 5 — Video input connectors.

Connect the coaxial cables from the video sources to the BNC Video In connectors.

3.2 Connecting the Loop Through Video

Figure 6 — Video Loop Through connectors.

If you would like to connect your video source to another device, you can use the Loop BNC connectors.

NOTE: The Loop BNC connectors are auto terminated. Do NOT connect a cable to the Loop BNC unless it is connected to another terminated device because it will cause poor quality video.

3.3 Connecting the Monitor

Figure 7 — Video Out connectors.

Connect the monitor to either Main or VGA connector.
Connect the spot monitor to the SPOT connector if required.

3.4 Connecting Audio

NOTE: It is the user's responsibility to determine if local laws and regulations permit recording audio.

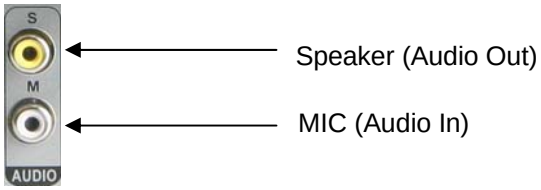


Figure 8 — Audio In and Out connectors.

Your DVR can record audio. Connect the audio source to Audio In. Connect Audio Out to your amplifier.

NOTE: The DVR does not have amplified audio output, so you will need a speaker with an amplifier. The audio input can be from an amplified source or directly from a microphone.

3.5 Connecting Alarms

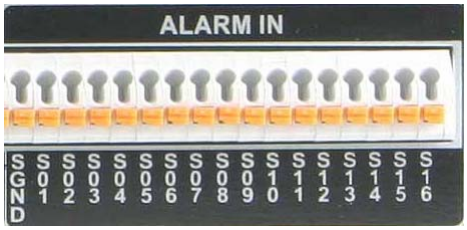


Figure 9 — Alarm Input connector strips.

NOTE: To make connections on the Alarm Connector Strip, press and hold the button and insert the wire in the hole above the button. After releasing the button, tug gently on the wire to make certain it is connected.
To disconnect a wire, press and hold the button below the wire and pull out the wire.

AI 1 to 16 (Alarm In)

You can use external devices to signal the DVR to react to events.
Mechanical or electrical switches can be wired to the AI (Alarm In) and GND (Ground) connectors.
See Chapter 6 — Advanced Settings – Alarm Setup.

GND (Ground)

NOTE: All the connectors marked GND are common.

Connect the ground side of the Alarm input and/or alarm output to the GND connector.

AO 1 TO 8 (Alarm Out)

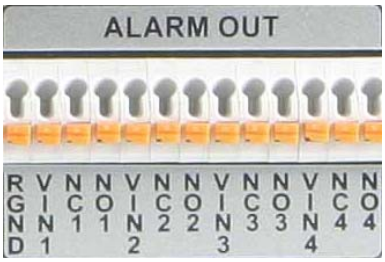


Figure 10 — Alarm Output connector strips.

The DVR can activate external devices such as buzzers or lights. Connect the device to the AO (Alarm Out) and GND (Ground) connectors. See Chapter 6 — Advanced Settings – Alarm Setup.

3.6 Connecting to the RS485

Figure 11 — RS485 Connector.

The DVR can be controlled remotely by an external device or control system, such as a control keyboard using RS485 half-duplex serial communications signals. The RS485 connector can also be used to control PTZ (pan, tilt, zoom) cameras. Connect RX-/TX- and RX+/ TX+ of the control system to the TX-/RX- and TX+/RX+ (respectively) of the DVR. See the PTZ camera or remote controller manufacture's manual for configuring the RS485 connection.

3.7 Connecting to the Network Port

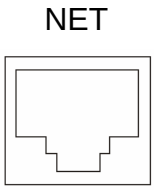


Figure 12 — Network connector.

The DVR can be networked using the 10/100Mb Ethernet connector. Connect a Cat5 cable with an RJ-45 jack to the DVR connector. The DVR can be networked with a computer for remote monitoring, searching, configuration and software upgrades. See Chapter 6.4 Network Setting – Ethernet Setup.

3.8 Connecting to the RS232 Port

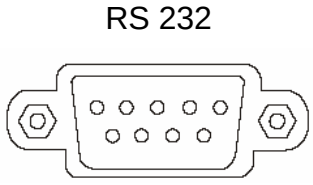


Figure 13 — RS232 connector.

An RS232 port is provided to connect an external modem for remote monitoring and configuration. See Chapter 6.4 Network Setting – Serial Setup and Appendix G – PSTN Modem Setting.
NOTE: The DVR is not supplied with a modem cable, and many modems are not supplied with cables. Make certain you have the correct cable when purchasing the modem.

3.9 Connecting to the USB Port

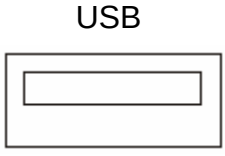


Figure 14 — USB connector.

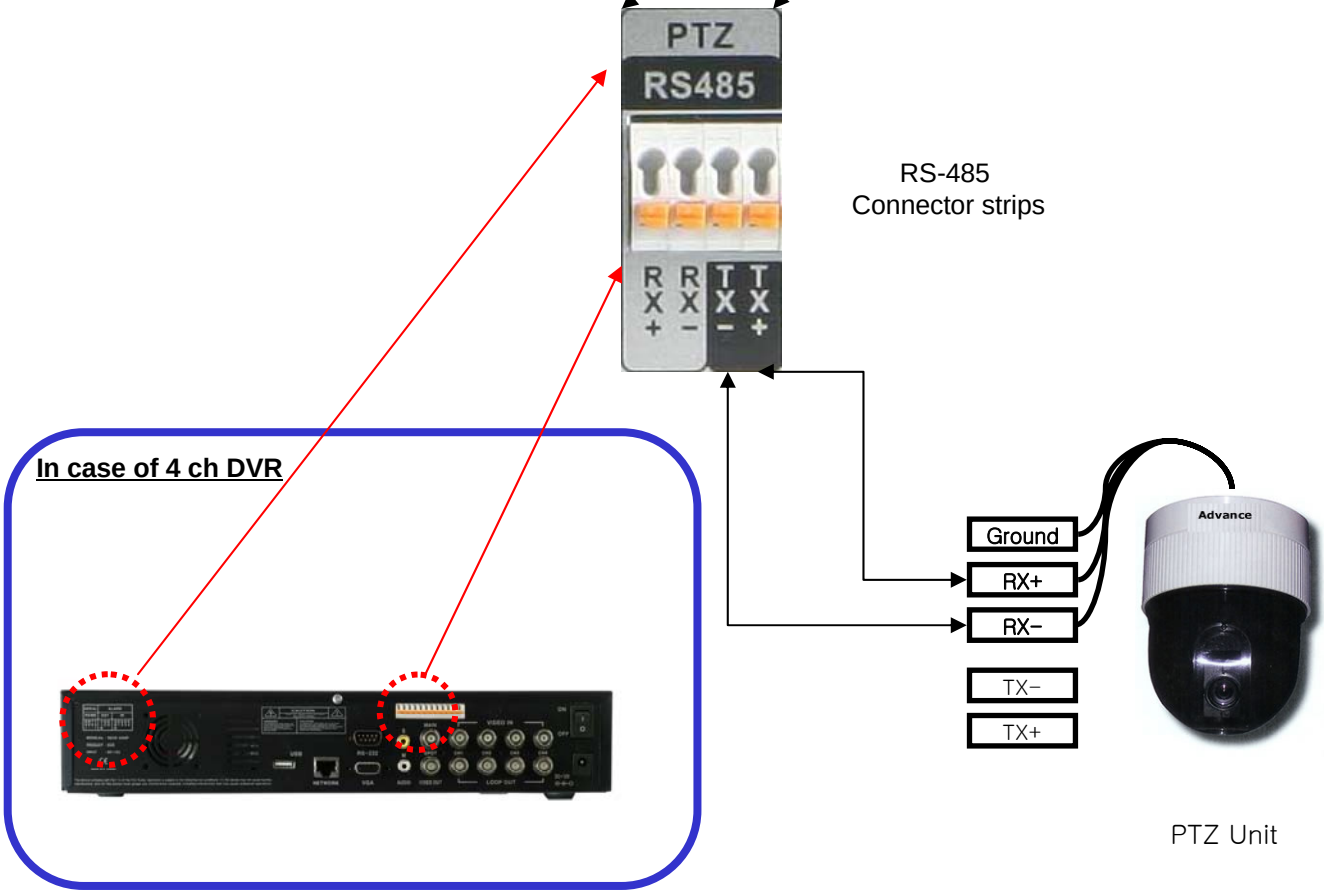
Two USB ports are provided. One is for USB Mouse and another is for connecting external hard disk drives or USB memory sticks for clip copying video. Position the external hard disk drive close enough to the DVR so that you can make the cable connections, usually less than 6 feet. Use the USB cable provided with the hard disk drive to connect it to the DVR. See Chapter 5 — Operation for information on archiving video to an external USB hard disk drive or USB memory stick.

3.10 Connecting to the PTZ Camera Unit

Make a connection of PTZ unit to RS485 at the rear panel of DVR. (See the figure below)

PTZ units currently being supported are **Pelco-D/P, NVCC-Z42N, CyberDome(Kalatel), Samsung, Samsung Techwin, Dongyang, DRX-500, Fastrax II, Sensormatic, PIH-7600, Eyeview Dome, etc.**

DVR Rear Panel



Chapter 4 — Quick Guide

4.1 How to Install

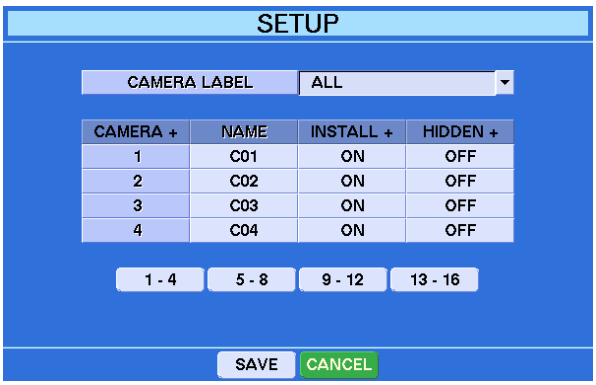
Install a Hard Disk Drive to your DVR after opening the upper case.

- Connect cameras to the Video In No. 1 ~ 16.
- Connect a Monitor to the Main(CCTV) or VGA. (If necessary, connect the spot monitor to the Spot A, B or C).
- Connect a Network cable to the Ethernet port.
- Turn on the power sources for cameras, monitor and DVR.

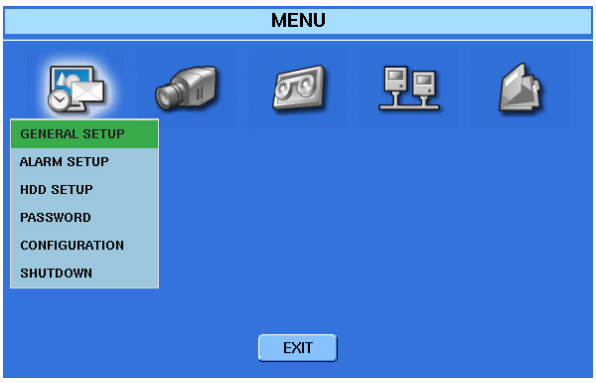
Your DVR will be initialized and it will take approximately 150 seconds. As soon as the DVR completes its initialization process, it will begin showing live video on the attached monitor. The default mode is to display all cameras at once. Pressing any camera button will cause that camera to display full screen. It displays live video until the user enters another mode. The default mode for audio is mute on. Please turn off the audio mute to play live audio.

NOTE: Refer to the Chapter 3 - Installation for more details.

4.2 Common User Interface



Icon	Remarks
CAMERA +	Button that allows to changes individual channel setting such as 1 – 4 -> 5 – 8 -> 9 – 12 -> 13 – 16 range.
INSTALL +	Allows to change all channel setting related to INSTALL.
	Button that shows the list of items for setting
SAVE	Saving button to change the setting value to take into affect
CANCEL	Cancel button not to change the setting value to revert to previous setting



Icon	Remarks
EXIT	Exit button without saving from the main menu.
▶	Button for Day, Night, Weekend setting as well as other detailed menu setting
8 +	From the setting value 8 + means that the minimum value is 8, there are higher numbers being set.

Mouse Function	Remarks
Up	Moves mouse pointer up or displays TOP menu at Live or Playback screen
Down	Moves mouse pointer down or displays BOTTOM menu at Live or Playback screen
Left	Moves mouse pointer to the left
Right	Moves mouse pointer to the right
Left Button	Works as SET from keypad. Displays full screen from Live or Playback
Right Button	Display CAMEO menu at Live or Playback screen.

4.3 Monitoring

Using front key pad :
Select the desired split screen using the front Display button.
To see the FULL screen, use the front numeric keys.

Using mouse:
Move the mouse to the bottom of screen, then Bottom Menu will be activated to select the split screen.
To see the FULL screen, click the left mouse button on a channel.

NOTE: Refer to the Chapter 5 – Operation.

4.4 How to Record

Press the Instant recording button on the front panel. Your DVR will start recording. To stop recording, press this button again. The factory default is applied to recording when the system is being turned on.

NOTE: Refer to Configuring Recording Settings in the Chapter 6 – Advanced Settings.

4.5 How to Playback

Click the search button of the front panel of DVR to find the date and time of recorded material for playback. User is able to search the video using the variety of playback methods of choice.

NOTE: Refer to the Chapter 5 – Operation - Searching Video & Playing Video

4.6 How to set up Networking

When using a dynamic IP, turn on the Dynamic IP in the Ethernet Setup menu. When using a static IP, enter the IP information in the Ethernet Setup menu.
Install the SMS software to your PC and add the DVR information to the SMS.

NOTE: Refer to the Ethernet Setup in the Chapter 6 – Advanced Settings and the included SMS manual.

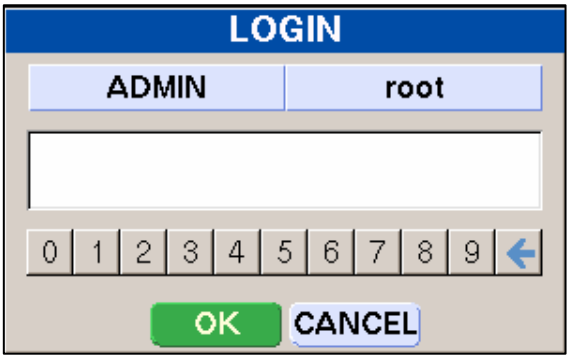
NOTE: You will be asked to confirm the password when pressing the front buttons. The default password is 1111.

Chapter 5 — Operation

5.1 Log-in to DVR

This system classifies user category as ADMIN, SUPERUSER, USER limiting the access to system operation. Each log-in authority level and access level has been summarized as below, and ADMIN level overrides all.

Press the MENU button to enter the setup screens. The Admin Password screen appears.



Enter the password by pressing the appropriate combination of number buttons and then the Enter button. The factory default password is 1111.

The log-in window appears when the following buttons are pressed.

Button	Log-in Authority
Menu	Admin
REC	Admin
Backup	Superuser
Search	Superuser
Play	Superuser
Pause	User
PTZ	User

5.2 Log-out to DVR

To log-out from the system, click the LOCK button at front panel to brute force log-out or click the Log-out button from the Top Menu using mouse.

The DVR system automatically does log-out after a certain time is elapsed. Menu Timeout that has been set in System Setting is the time for predefined automatic log-out.

Button	Remarks
Lock	It locks DVR as Log-out stage

5.3 Live Monitoring

NOTE: This chapter assumes your DVR has been installed and configured. If it has not, please refer to Chapters 3. Installation and 6. Advanced Settings.

The DVR's controls are similar to a VCR. As with a VCR, the main functions are recording and playing back video. However, you have much greater control over recording and playing back video. You can establish recording schedules based on time of day, night and weekend. The DVR allows you to search through the recorded video using much more sophisticated tools than those available with VCRs. Additional DVR features that are not available with VCRs are remote control and viewing, recording video at the same time you are watching previously recorded video, and printing images to a standard printer.

The Front Panel Display and controls are described in Chapter 2 — Digital Video Recorder Layout.

As soon as the DVR completes its initialization process, it will begin showing live video on the attached monitor. The default mode is to display all cameras at once. Pressing any camera button will cause that camera to display full screen. It displays live video until the user enters another mode. The default mode for audio is mute on so you have to turn off the mute to play live audio.

Pressing the DISPLAY button cycles the DVR through the different display formats.

Pressing the ROTATE button allows the manual rotations whenever pressing this button.

When in one of live formats, press the ENTER button and a blue square cursor will appear. You can move the cursor by using arrow buttons and press the ENTER button again to pop up the cameo menu. The following screen will appear.

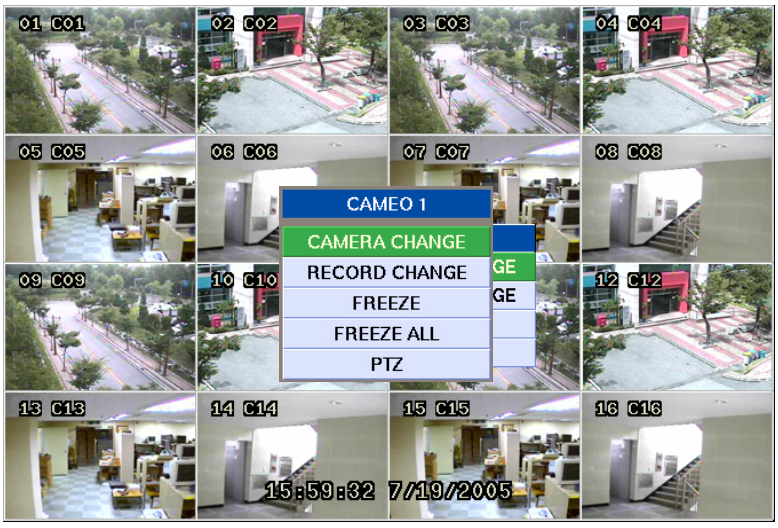


Figure 15. LIVE CAMEO MENU.

You can change the live camera to the selected channel. Press the ENTER button after highlighting the CAMERA CHANGE. The below pop-up menu will appear.

Figure 16 – CAMEO – CAMERA CHANGE.

You can select a cameo camera and the video will be swapped to the cameo camera.

When selecting the RECORD CHANGE on the CAMEO menu, the below menu will be popped up.

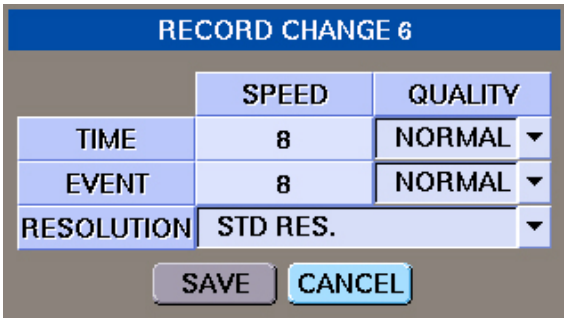


Figure 17 – CAMEO – RECORD CHANGE.

You can change the recording quality, resolution and image quality to the selected channel in this menu.

You can freeze the live display screen by selecting the FREEZE or FREEZE ALL in the CAMEO menu shown in the following menu screen.

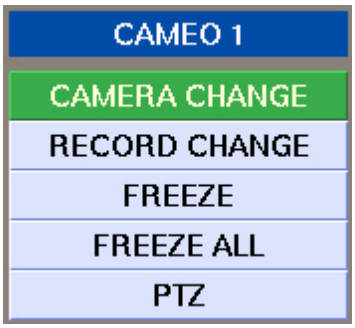


Figure 18 – CAMEO MENU – FREEZE.

You can freeze all the channels by selecting the FREEZE ALL until you press the FREEZE ALL again or you can freeze one channel by selecting FREEZE until you press the FREEZE again.

Live Cameo Menu

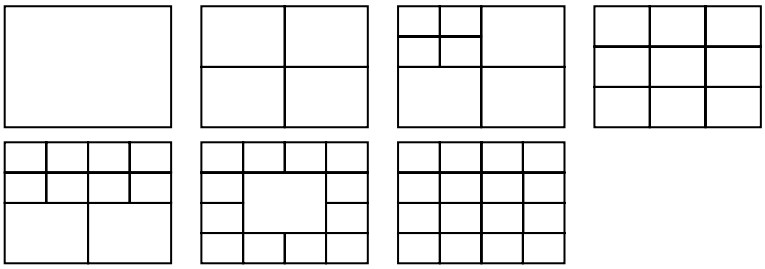
When in one of live formats, press the ENTER button and a blue square cursor will appear. When moving the cursor to the bottom or top, the following pop-up menu will appear.

Figure 19 – CAMEO – UP LIVE MENU.

You can enter to any menu of Search, Backup, Alarm, Status, Recording and Log-out.

Figure 20 – CAMEO – DOWN LIVE MENU.

The Down Live Menu will allow you to change the live view formats.

Button	Remarks
Display	Whenever pressing the button, 1, 4, 7, 9, 10, 13, 16 screen display is sequentially showed up. It helps to monitor efficiently by selecting the choice of screen split. 
Rotate	In the live mode, pressing the ROTATE button displays another screen whenever you press this button manually. Pressing the button allows manual screen change in 1, 4, 9 split screens. For example, pressing the button in 4 split screen changes into the next 4 different camera inputs.
Enter	Selecting Cameo or displaying Cameo menu
Numeric Key	Used for selecting the corresponding camera directly
10+ Num. Key	Used for entering number greater than 10

5.4 PTZ Control

The DVR can control multiple cameras that have Pan, Tilt and Zoom capabilities. Press the ENTER button to pop up the Live Cameo Menu and select PTZ to get into the PTZ mode. The PTZ can be controlled in split screens by mouse or front key buttons. When pointing a PTZ camera channel on split screens, the mouse pointer will be changed.

When pressing the PTZ button on the front, it will activate the PTZ camera that was used recently.

There are two ways to control the PTZ functions, one is by mouse and another is by front key buttons.

1. By Mouse ;

- Press the right mouse button on a PTZ camera channel to pop up the Live Cameo Menu.
- Select PTZ on the Live Cameo Menu.
- Pressing the right mouse button again, the below PTZ Menu screen will be displayed.
- You can control the Zoom In/Out, Focus and Iris by pressing the buttons on the below menu.
- Also, you can open the PTZ setup screen menu by pressing the menu button on the below.

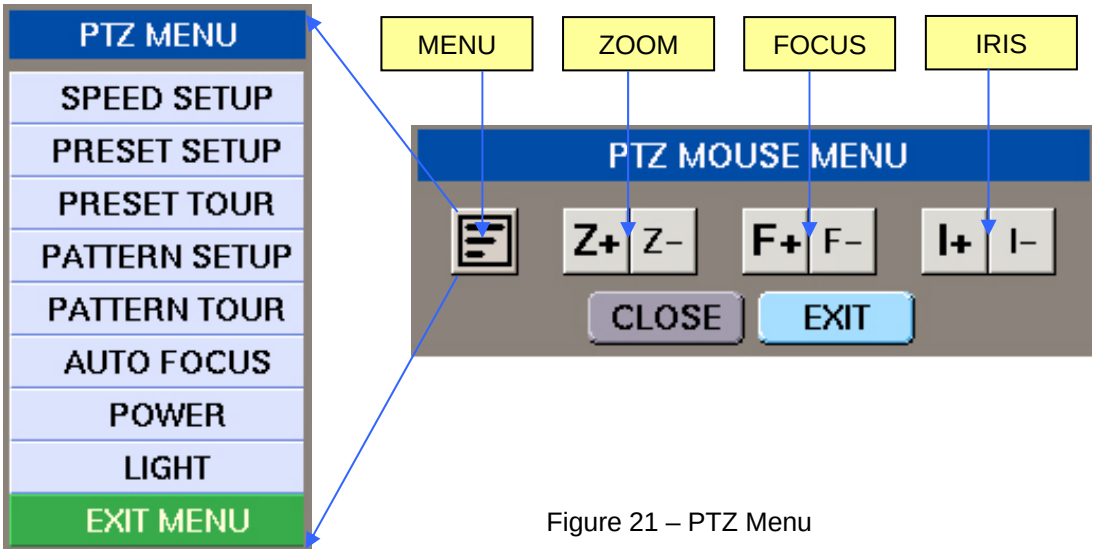


Figure 21 – PTZ Menu

2. By Front Key Buttons;

- Press the Enter button and move to a PTZ camera channel.
- Press the Enter button once again to pop up the Live Cameo Menu.
- Select PTZ on the Live Cameo Menu.
- Once pressing the Enter button again, the above PTZ menu screen will be displayed.
- Zoom Control: Press the Zoom (Backup) button in the PTZ mode and press Fast Rewind for Zooming In and Fast Forward for Zooming Out.
- Focus Control: Press the Focus (Search) button in the PTZ mode and you can control Focus by Fast Rewind and Fast Forward buttons.
- Iris Control: Press the Iris (Pause) button in the PTZ mode and you can control Iris by Fast Rewind and Fast Forward buttons.

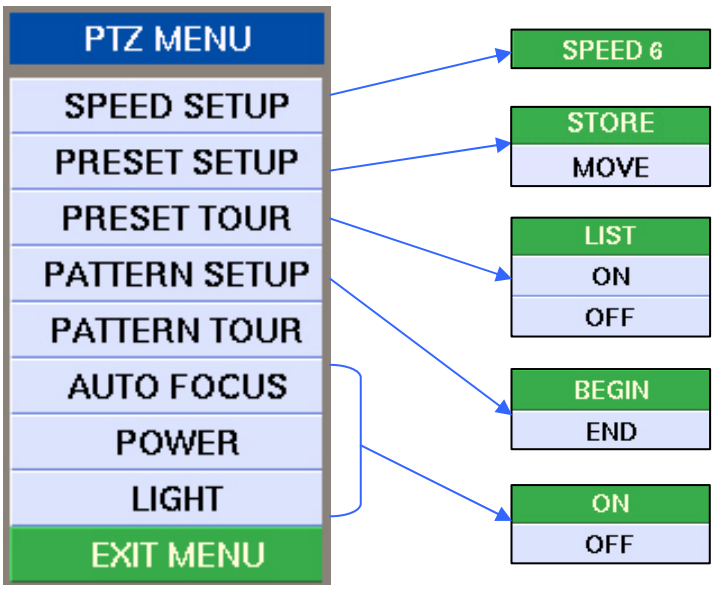


Figure 22 – PTZ SUB-MENU.

Speed Setup:

You can select the moving speed of the PTZ camera by choosing the speed between 1 to 8 after pressing SPEED.

NOTE: When using mouse to move PTZ camera, the moving speed depends on the mouse location. When locating the mouse to the edge side out of center, the speed is getting faster.

Preset Setup:

Move the PTZ camera to a target location first to set up a preset and press STORE. To move to the saved preset points, press MOVE and select a preset number. Then, the PTZ camera will move to the preset point. You DVR can save up to 64 presets.

Preset Tour:

You can make a preset tour by listing 6 different presets. Press the List and you can make a list with 6 different presets and press "On" to make the recorded preset tour.

Pattern Setup:

You can make a pattern by recording the movements, zooming, focusing and iris. Press the begin button and move or zoom the PTZ camera and then press the end button. All the panning and tilting movements, zooming and iris control will be recorded.

Pattern Tour:

When pressing the pattern tour button, the PTZ will track the saved pattern.

Auto Focus / Power / Light:

You can turn on or off the auto focus, power or light by selecting each category and pressing On or Off.

NOTE: Some PTZ cameras don't have Preset Tour or Pattern Tour functions.

5.5 Recording Video & Audio

Recording Video

Once you have installed the DVR following the instructions in Chapter 3 – Installation, it is ready to record. Unless you change the setup, the DVR will start recording when you press the REC button on the remote or front panel.

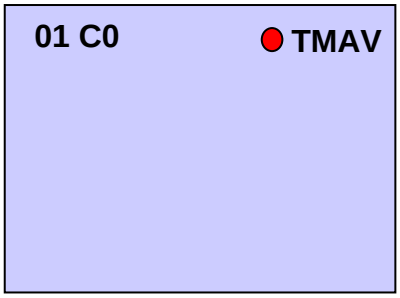
Although you will be able to record without changing the unit from its original factory settings, you may want to take advantages of the DVR's many tools. See Chapter 6 – Advanced Settings for detailed descriptions of the recording mode options. Here is a brief description of some of the settings.

Recording Audio

If the DVR was set up to record audio. It will record audio when video is recording.

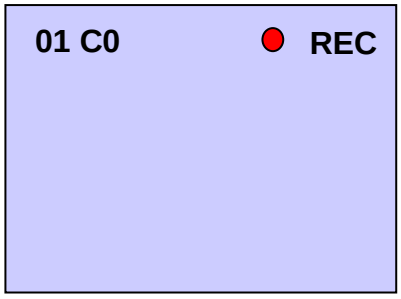
NOTE: Make certain you comply with all local federal laws and regulations when recording audio.

Recording Cameo Window



Ch 1 Cameo Window

T : Time Recording
M : Motion Recording
A : Alarm Recording
V : Videoloss Recording



Ch 1 Cameo Window

REC: Default Recording

Button	Remarks
REC	Start and stop recording button for the current schedule setting

5.6 Searching Video

There are various ways in searching the recorded data on DVR.

GOTO FIRST: Searching the earliest recorded data.
GOTO LAST: Searching the latest recorded data.
CALENDAR : Using the internal calendar program to search for the recorded video data by date/time.
RECORD LIST : Prioritized search for recorded date.
EVENT SEARCH : Search for the event occurred by search date.
OVERLAPPED LIST : Search for the data with overlapped date.

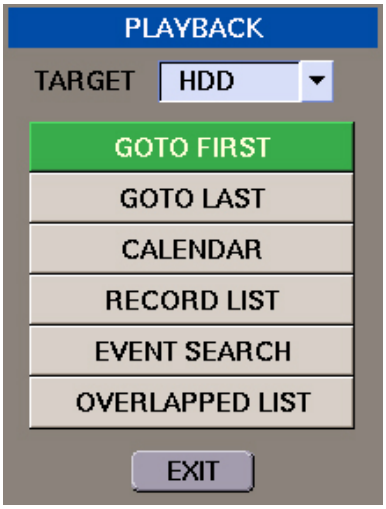


Figure 23 – SEARCH MENU.

You can select the media from a down list by selecting the box beside TARGET. You can playback the recorded video from HDD (Hard Disk Drive), CD or USB.

GOTO FIRST

When pressing the GOTO FIRST, the DVR will play back from the earliest recorded data.

GOTO LAST

When pressing the GOTO LAST, the DVR will play back from the latest recorded data which is 30 seconds earlier than the current time.

CALENDAR SEARCH

Figure 24 – CALENDAR SEARCH.

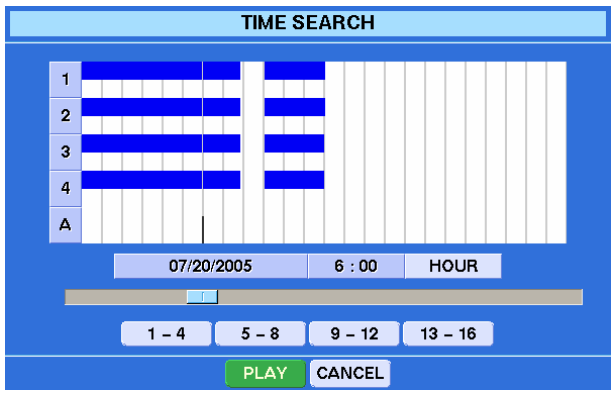


Figure 25 – TIME SEARCH.

Days with recorded video are displayed on the calendar in orange color. You can highlight the days with recorded video by using the arrow buttons. Once you have highlighted a day, press the ENTER button to select it.

A time bar will be displayed at the bottom of the TIME SEARCH screen. Hours in which video was recorded will be highlighted with blue. You can use Left and Right arrow buttons to select the time. Once the time bar is highlighted, you can select minutes by using the Left and Right arrow buttons after pressing the ENTER button.

NOTE: The bar graph colors will be different for each recording mode. The blue is by Time, Red is by Motion, Green is by Alarm and Orange is by Video Loss.

RECORD LIST

Once you have pressed the RECORD LIST, your DVR will display a list with recorded video and Date information. Select a list and press the PLAY button to playback the recorded video.

.

EVENT SEARCH

Select the EVENT SEARCH in the SEARCH menu.

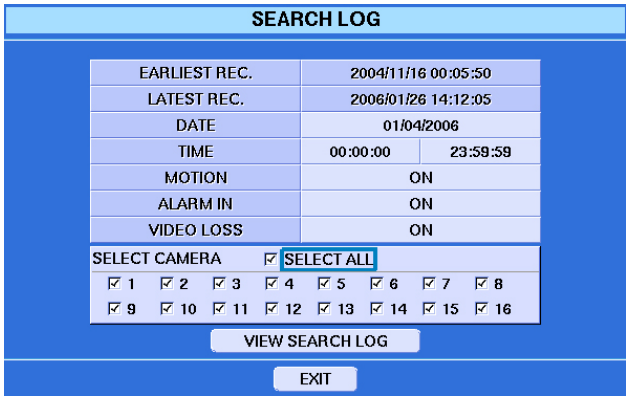


Figure 26 – SEARCH LOG.

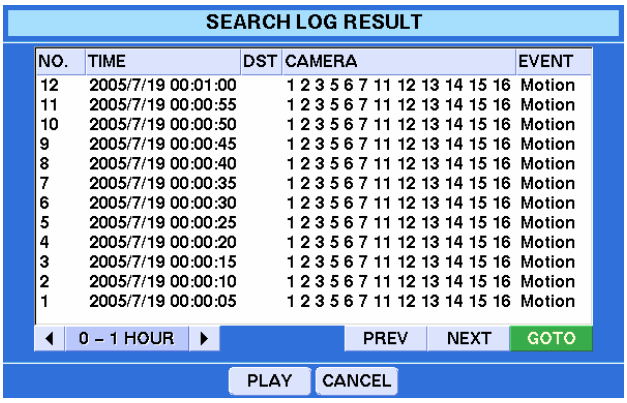


Figure 27 – SEARCH LOG RESULT.

The EVENT SEARCH screen will display changeable Date/Time, recorded information and channel selection. You can change the date/time and select the channels that you want to search.

You can search the recorded video by Motion, Alarm In and Video Loss by turning on or off. Once you have selected the events and channels for searching, press the VIEW button and you will be asked to confirm the search of the recorded video with the events.

You will get a recorded list with events and you can playback by selecting one of them on the list.

OVERLAPPED LIST

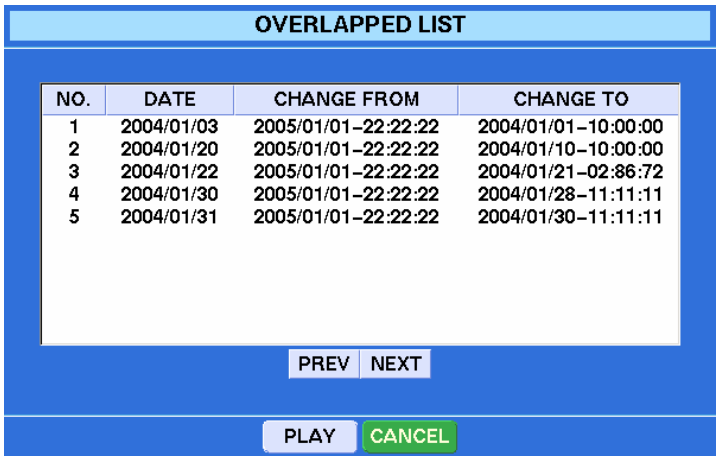


Figure 28 – OVERLAPPED LIST.

You can have an overlapped list by selecting OVERAPPED LIST in the SEARCH menu. You can select one of the video files in the list and playback. Your DVR will create the overlapped video list caused by Date/Time changes or the DST (Daylight Saving Time).

5.7 Playing Video

Normal Playback

It means a conventional playback.
It supports forward/backward playback as well as playback speed and pause.

Single Step Playback

Single step playbacks the screen display one frame at a time by pressing up/down button during the pause stage. If you press the PAUSE button again, it returns to Normal Playback mode.
Single Step playback is useful for the viewing of specific video image in detail.

Smart Playback

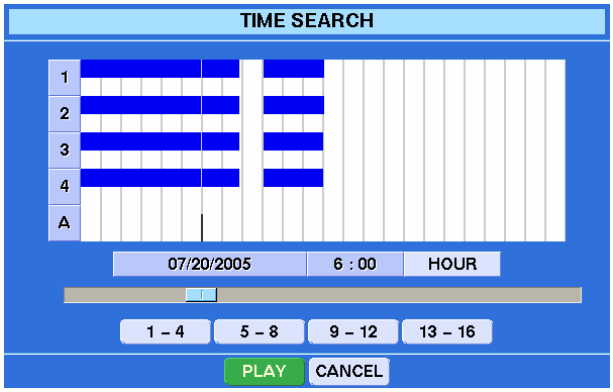
Pressing the Down Arrow button from Normal Playback mode, Smart Playback will be activated.
Smart playback is a function that searches and playbacks the video that has movements. Pressing the Down Arrow once again will return to the Normal Playback Mode.
It is convenient to search and playback the incidents that occurred over a long period of time.

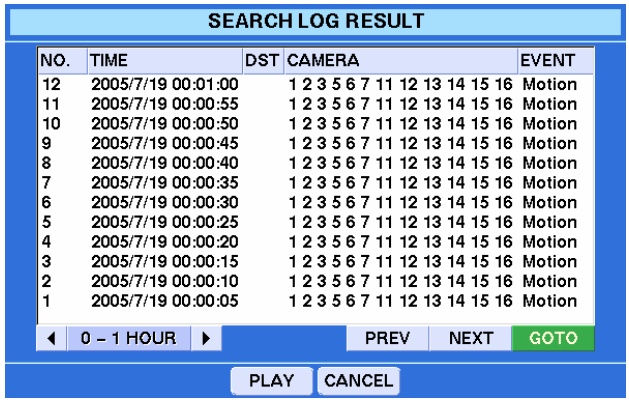
Panorama Playback

Pressing up direction key from a single screen playback mode changes to 4/9/16 screen panorama viewing mode. When it goes to single screen, the mode is changed to Normal Playback.
Panorama playback does display a single frame of the video into several screens frame by frame.
It is very useful feature to monitor a specific video image's progress.

Normal Playback

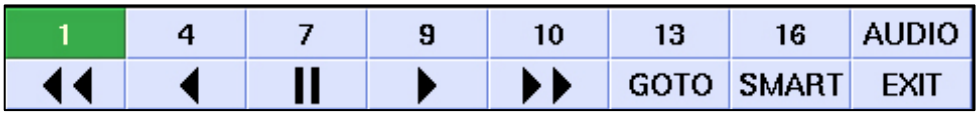
Normal playback means a constant speed playback. Pressing PLAY button enables the display of video that has been searched through Searching Video.





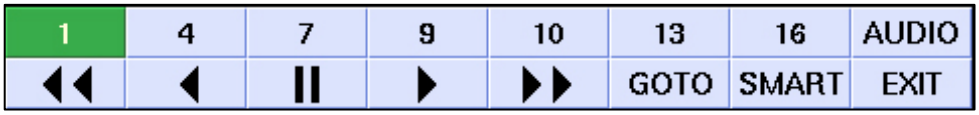
High-speed Playback

During the playback, press Fast Rewind or Fast Forward button.



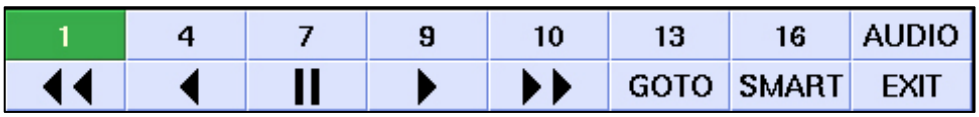
Low-speed Playback

After pressing the PAUSE button during playback, press Fast Rewind or Fast Forward to have low-speed playback. It supports up to 4 different speeds, x1/2, x1/4, x1/8 and x1/16.



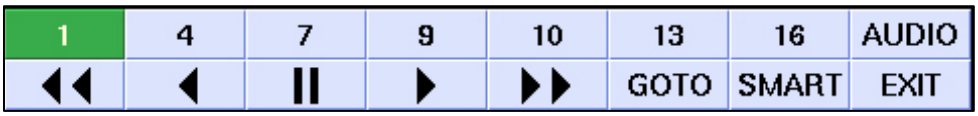
Single Step Playback

When playback is paused, pressing the Rewind or Forward button changes to Single Step Button. Pressing the Right Arrow Button allows the playback of the one frame at a time.



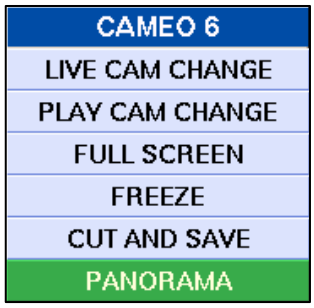
Smart Playback

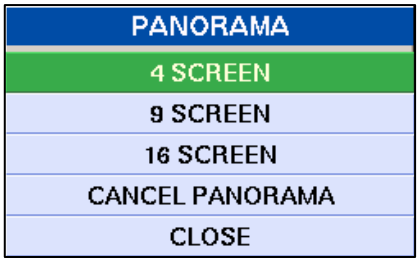
It is an ideal playback for video with many movements. It is useful for fast checking of video clips. Pressing the Down Arrow button during playback or pressing the SMART button on the Down Playback Cameo menu will start the smart playback.



Panorama Playback

During playback select panorama from the Cameo Menu, then select number of screens to be displayed. If you press the Up Arrow Button during the single screen display, panorama playback is activated. The Display button controls the number of splitting screens.





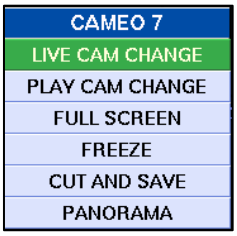
GoTo Time Search

It is the function that allows you to move into the selected time. It is possible to jump by hour or minutes. It can be done by pressing GOTO button on the Down Playback Cameo Menu during playback.

Other Playback related functions

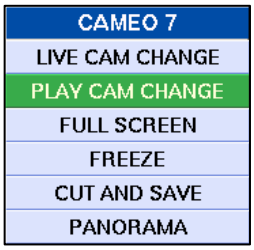
Live Monitoring during Playback

Live monitoring is possible during the playback by using the Playback Cameo Menu. Also, the live camera can be changed to playback by selecting a channel on the Camera Change menu of the Playback Cameo Menu.



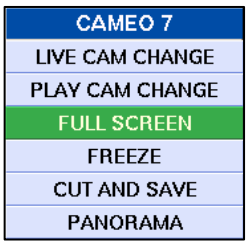
Playback Camera Change up

While playing back, the playback camera channels can be changed to live video easily by selecting a channel on the Play Cam Change of the Playback Cameo Menu.



Full Screen Playback

While playing back, the screen can be changed to full screen by selecting Full Screen on the Playback Cameo Menu.



Button	Remarks
Search	The first button to be used for search. Pressing the button displays Search Menu.
ESC	Cancel the playback and change to live screen mode.
Enter	Select Cameo from playback screen.
Fast Rewind	Playback speed up and down control for backward direction.
Fast Forward	Playback speed up and down control for forward direction.
Pause	Temporary stopping of playback.
Forward Play	Forward playback of video data.
Reverse Play	Backward playback of video data.
Up	Panorama playback for a single screen.
Down	Used for Smart Search.
PTZ	Used for PTZ Control
Display	Change the split mode of playback screen.

5.9 Copying Video Clip

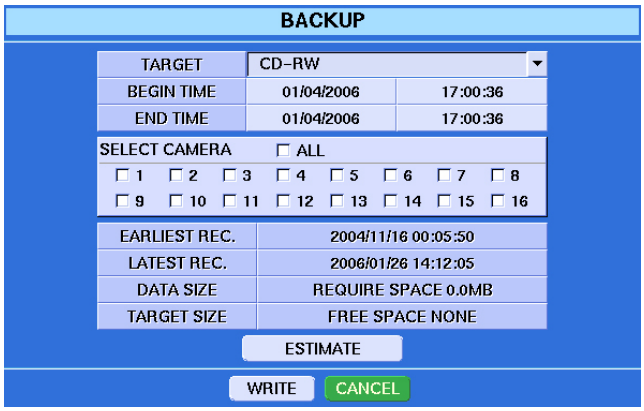
This is the function that allows you to copy a part of video clip during play back into USB or other recording media.
There are two ways of using it, with mouse or with front keys.

Using the mouse

- Select CUT AND SAVE from Cameo Menu
- Select START CUT from CUT AND SAVE
- Select END CUT for copying section
- Pressing CUT AND SAVE displays the below dialog window

Using the front keys

- Click the Backup button to set the starting time
- Press the Backup button again to set the end time
- When pressing the Backup button once again, the below dialog window will be popped up.



Make a copy after confirming the user selected channel and time frame.

Select CD or USB for storage media from TARGET.

- **DvrPlayer** is copied into backup CD or USB device.
- Backup video can be played by **DvrPlayer**.

(※ DvrPlayer : Single channel video player similar to Windows Media Player)

Button	Remarks
Backup	Pressing the button displays the Backup Menu Window. Set the Starting time and End time for Cut and Save Video during playback.

5.10 Backup Video Data

Backup to the internal CD-RW or DVD Combo

You can backup the recorded video to the built-in CD-RW or DVD Combo. Press the BACKUP button on the front or remote. The following Backup screen will appear.

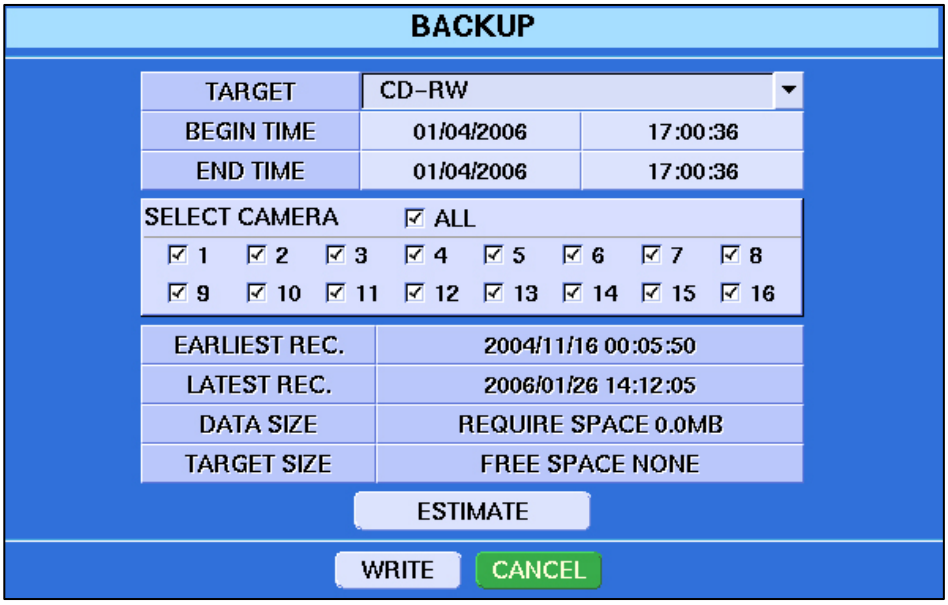


Figure 29 – BACKUP.

You can set up the Date/Time for backup and select the channels. Press the ESTIMATE button and your DVR will calculate the data size and display it in the box beside DATA SIZE.
Press the WRITE button and your DVR will start burning.

NOTE: When the data size is bigger than 650MB, you will be asked to put a new CD after burning the first one.

You will be asked to confirm to backup the data to a CD.

- DvrPlayer is copied into backup CD or USB device automatically.
- Backup video can be played by DvrPlayer.

(※ DvrPlayer : Single channel video player similar to Windows Media Player)

Button	Remarks
Backup	Pressing the button displays the Backup Menu Window.

5.11 Checking DVR Status

Checking Status

You can check the status of the DVR by selecting STATUS from the Top Live Cameo Menu. The status screen displays Recording, Event, Network, Alarm, Disk and Key information.

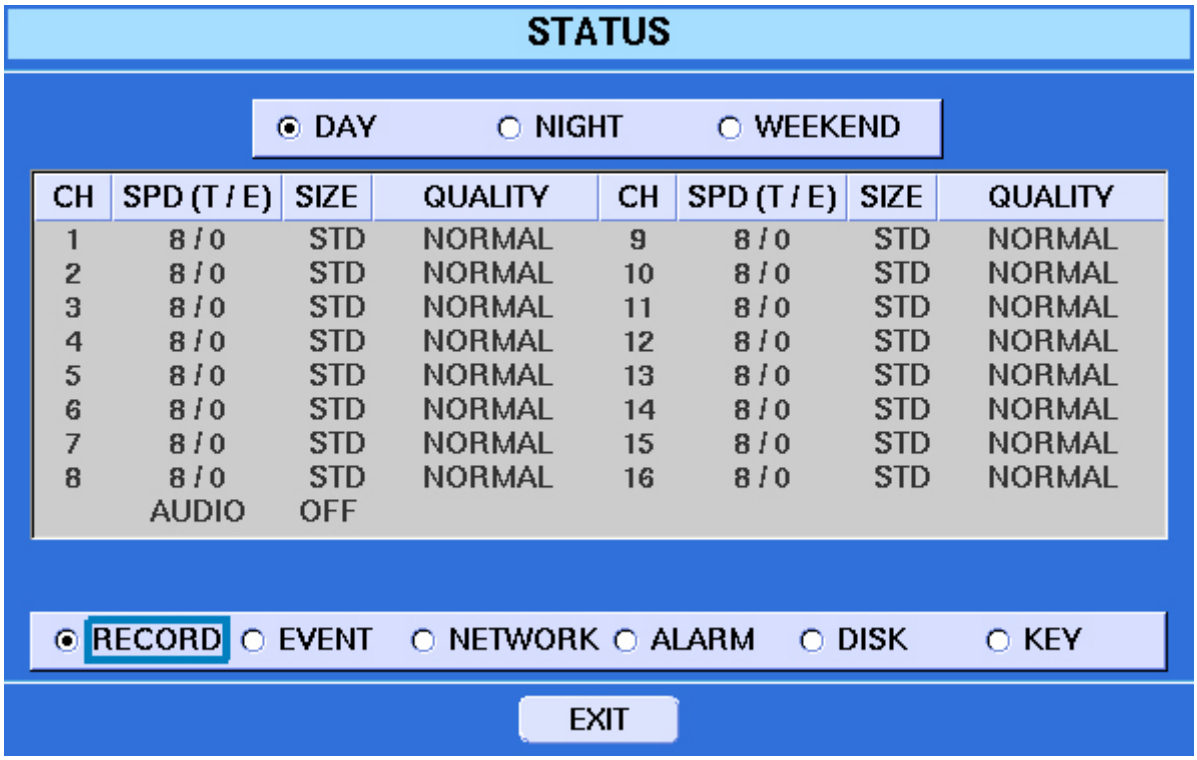

STATUS
DAY
NIGHT
WEEKEND
CH SPD (T / E) SIZE QUALITY CH SPD (T / E) SIZE QUALITY
1 8 / 0 STD NORMAL 9 8 / 0 STD NORMAL
2 8 / 0 STD NORMAL 10 8 / 0 STD NORMAL
3 8 / 0 STD NORMAL 11 8 / 0 STD NORMAL
4 8 / 0 STD NORMAL 12 8 / 0 STD NORMAL
5 8 / 0 STD NORMAL 13 8 / 0 STD NORMAL
6 8 / 0 STD NORMAL 14 8 / 0 STD NORMAL
7 8 / 0 STD NORMAL 15 8 / 0 STD NORMAL
8 8 / 0 STD NORMAL 16 8 / 0 STD NORMAL
AUDIO OFF
RECORD
EVENT
NETWORK
ALARM
DISK
KEY
EXIT

Figure 30 – STATUS.

Chapter 6 — Advanced Settings

Before using your DVR for the first time, you will need to establish the initial settings. This includes items such as time and date, camera, audio, remote control, record mode, network and password. Your DVR can be set up using various screens and dialog boxes.

Press the MENU button to enter the setup screens. The Admin Password screen appears.

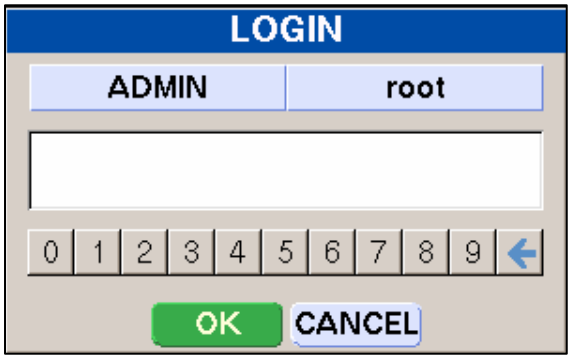


Figure 31 — ADMIN PASSWORD.

Enter the password by pressing the appropriate combination of Camera number buttons and then the Enter button. The factory default password is 1111.
After Log-in, the menu window is displayed as below.

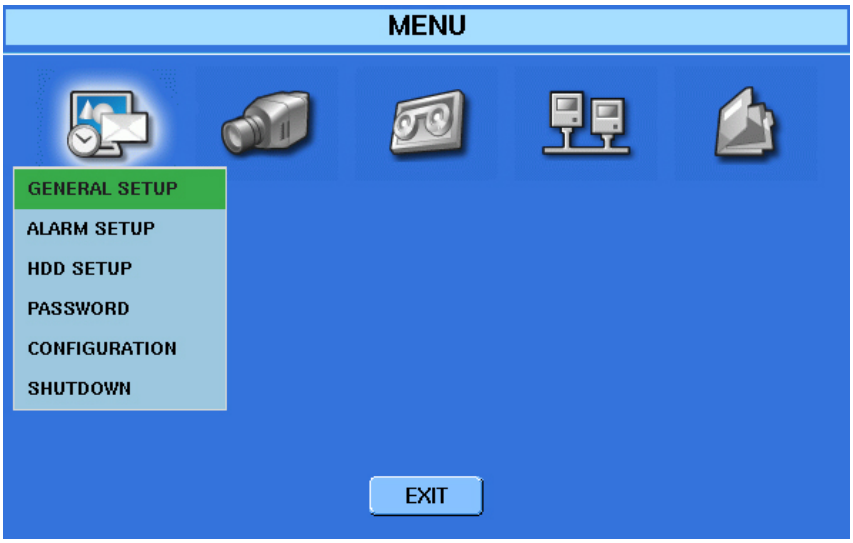


Figure 32 — The screen image after Log-in

6.1 System Setting

Configuring System Settings

Select the SYSTEM SETUP in the main menu and it's including General Setup, Alarm Setup, HDD Setup, Password, Configuration and Shutdown.

GENERAL SETUP

Select the GENERAL SETUP in the main menu and the GENERAL SETUP screen displays Video Format, Language, Date Format, Time Zone, Date Display, Date, Time, Buzzer, Unit Address, Base Camera Number and Menu Timeout.

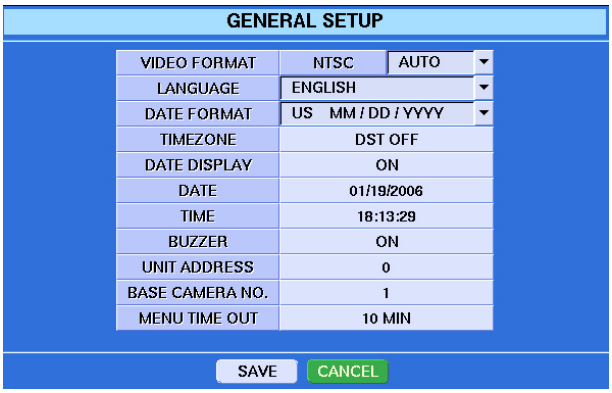


Figure 33 – GENERALSETUP.

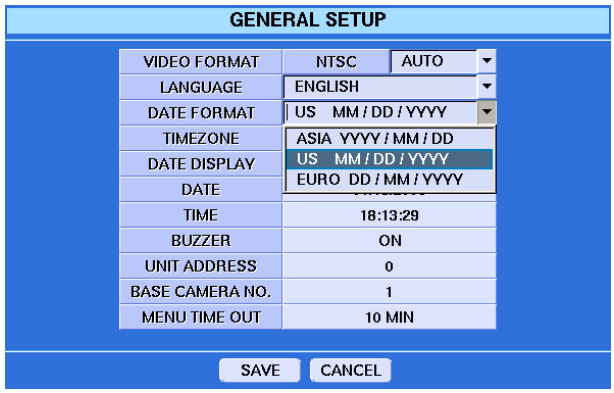


Figure 34 – GENERAL SETUP(2).

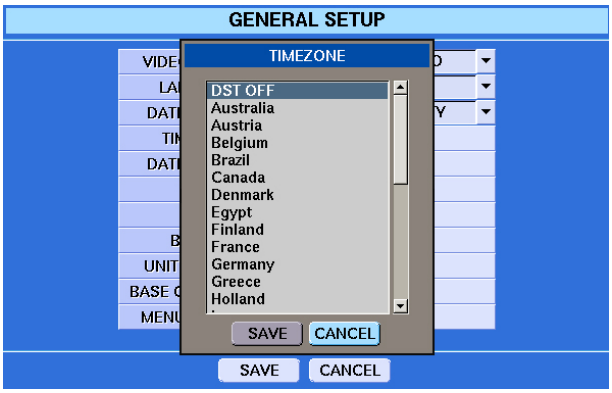


Figure 35 – GENERAL SETUP(3).

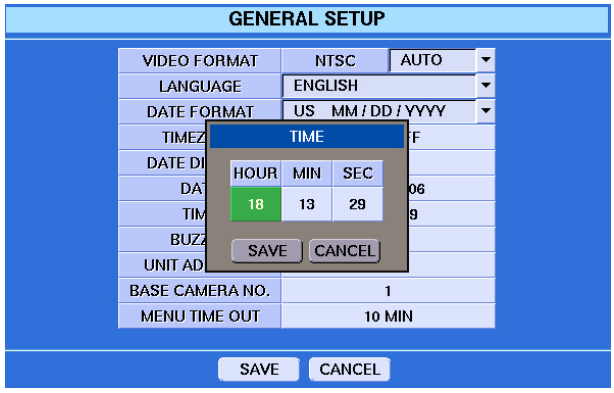


Figure 36 – GENERAL SETUP(4).

Video Format:

You can select the Video Format between Auto, NTSC and PAL, according to your location. When selecting Auto, the DVR will detect the video format from the connected video sources.

NOTE: Please don't mix the video sources like NTSC and PAL cameras at the same time. It will cause errors in detecting the video format.

Language:

You can select a language from a down list menu. The DVR supports English, German, French, Spanish, Japanese, Chinese and Korean.

Date Format:
You can select the Date Format from a down list menu and the DVR supports Asia (Year/Month/Date), US (Month/Date/Year) and EURO (Date/Month/Year).

Time Zone:
You can select your time zone from a down list menu. This time zone selection is to apply the DST (Day/Light Saving Time). If your region is not using the DST, your system will not apply the DST.

NOTE: When selecting DST OFF, your DVR will not apply the DST.

Date Display:
You can turn on or off the Date Display. When turning on the Date Display, your DVR will display the date and time on the screen.

NOTE: When turning off the DATE DISPLAY, your DVR will not display the date and time information on the screen.

Date:
You can change the date by pressing the box beside the Date heading.

Time:
You can change the time by pressing the box beside the Time heading.

Buzzer:
You can turn on or off the internal buzzer. Whenever pressing any button on the front, the DVR will make buzzer sound.

Unit Address:
You can set up an ID for your DVR to distinguish the unit when using multiple DVRs in the same place.

Base Camera Number:
You can set the base camera number. For example, if you set "111" on the base camera number, the camera number on the screen will be displayed from "111".

Menu Time Out:
You can set up the menu time-out duration up to 10 minutes by highlighting the box beside MENU TIME OUT and pressing the enter button.

You can save your changes and return to the main menu by highlighting SAVE and pressing the enter button. Selecting CANCEL exits the screen without saving the changes.

ALARM SETUP

Select the ALARM SETUP in the main menu and press the enter button. The ALARM SETUP screen displays the alarm outputs, 1-4.

Figure 37 – ALARM TYPE-ALARM OUT.

You can enable or disable each alarm output by pressing the box below SIGNAL+ and select the proper alarm type between NO (Normally Open) and NC (Normally Close) in a drop down list. When pressing the SIGNAL+ heading, the selection will be applied to all alarm outputs.

Select the ALARM IN button and press the enter button to select the type for alarm in. The ALARM IN screen displays the alarm inputs in groups of four: 1-4, 5-8, 9-12 and 13-16.

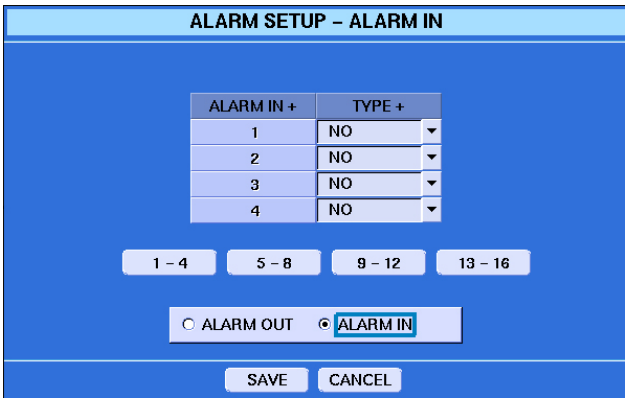


Figure 38 – ALARM TYPE-ALARM IN.

You can select proper alarm type from described earlier.

When pressing the ALARM CLEAR button, the system will clear the triggered alarms. The ALARM SET button activates the alarm settings again.

You can save your changes and return to the main menu by highlighting SAVE and pressing the button. Selecting CANCEL exits the screen without saving the changes.

HDD SETUP

Select the HDD SETUP in the main menu and press the enter button. The HDD SETUP screen will display three pages, INSTALL, OVERWRITE and CHECK.

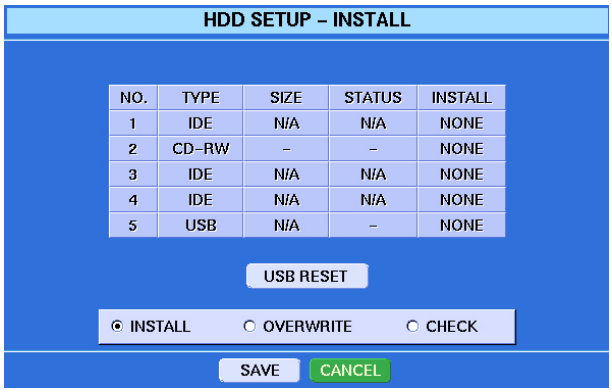

HDD SETUP – INSTALL
NO. TYPE SIZE STATUS INSTALL
1 IDE N/A N/A NONE
2 CD-RW – – NONE
3 IDE N/A N/A NONE
4 IDE N/A N/A NONE
5 USB N/A – NONE
USB RESET
INSTALL OVERWRITE CHECK
SAVE CANCEL

Figure 39 – HDD SETUP.

The INSTALL page will show the HDD (Hard Disk Drive) status and you can initialize new hard disk drives by selecting the boxes below INSTALL and pressing the enter button.

NOTE: You have to initialize the disks when installing new hard disk drives.

Select the second page, HDD SETUP – OVERWRITE and the following screen will appear.

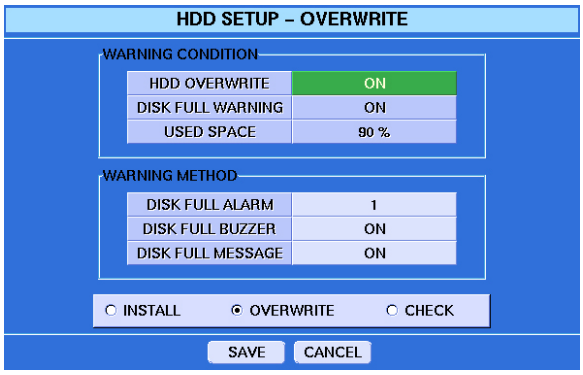


Figure 40 – HDD SETUP – OVERWRITE.

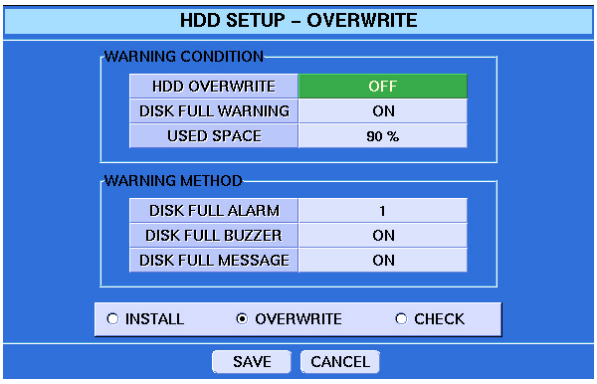


Figure 41 – HDD SETUP – OVERWRITE(2)

You can turn on or off the overwriting option by selecting the box beside HDD OVERWRITE.

NOTE: When turning off the overwriting, your DVR will stop recording when the disk is full.

When turning off the overwriting, the boxes beside REMAIN TIME and USED SPACE will be activated.

You can set up the HDD usage by changing the REMAIN TIME and USED SPACE. Refer to the screens below.

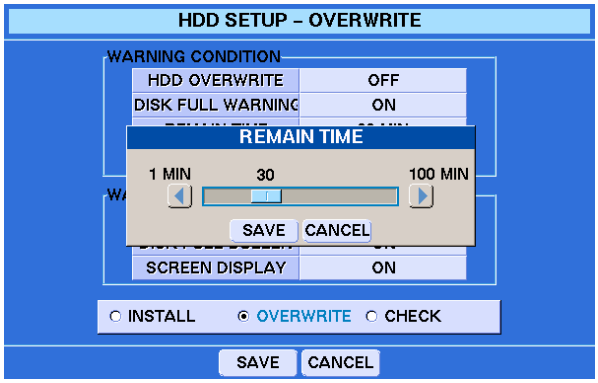


Figure 42 – HDD SETUP – OVERWRITE(3).

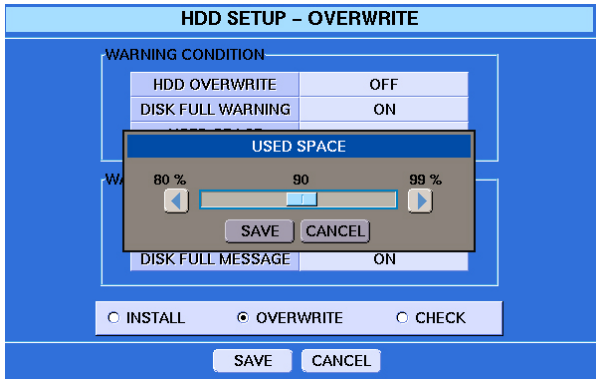


Figure 43 – HDD SETUP – OVERWRITE(4).

NOTE: When setting up the USED SPACE to 80%, your DVR will stop recording at 80%. Your DVR will check the settings of REMAIN TIME and USED SPACE automatically and record as much as possible.

Your DVR has 3 different warning methods when the disk is full but the DISK FULL WARNING must be turned on in the WARNING METHOD menu.

You can assign an alarm out by selecting the box beside DISK FULL ALARM and turn on the buzzer or OSD (On Screen Display) warning message.

Select the 3rd page, CHECK and the following screen will appear.

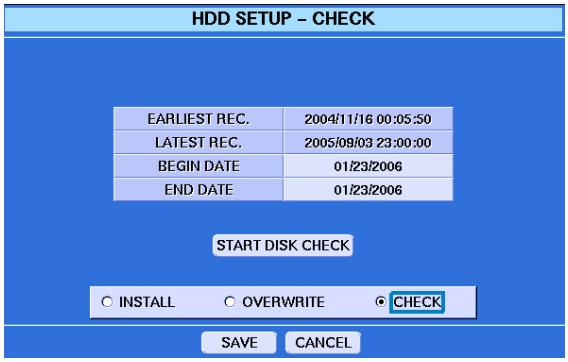


Figure 44 – HDD SETUP –CHECK.

The HDD SETUP-CHECK screen will display the earliest and latest recording information and you can check the files in the period, from BEGIN TIME to END TIME by highlighting the START DISK CHECK and pressing the enter button.

PASSWORD SETUP

An Administrator password is required to turn the system off, enter the setup screen, load default setups, clear all data, change system date and time and change the Administrator password. Highlight Password in the Main menu and press to enter the Password screen.

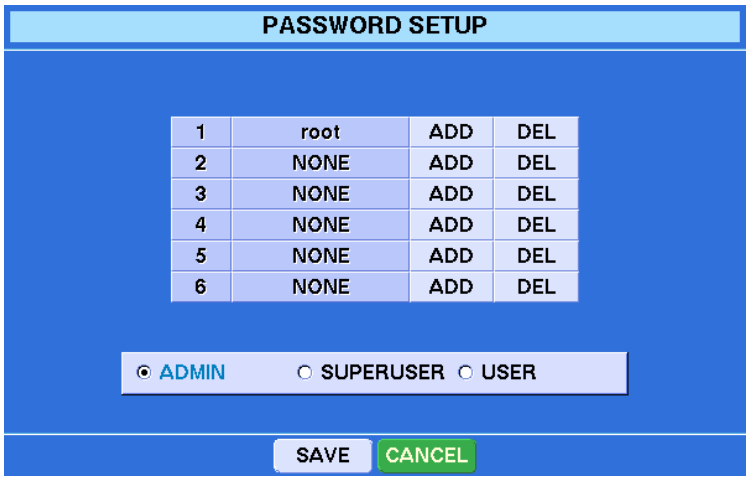


Figure 45 — PASSWORD SETUP.

The PASSWORD SETUP screen displays three different user authorization, ADMIN, Superuser and User. Highlight the ADD or DEL buttons and press the enter button to add or delete each user. When adding a new user account, you will be asked to enter the new password and to confirm it. When deleting a user account, you will be asked to confirm.

NOTE: The Admin, Superuser and User passwords are composed of up to eight digits using the number buttons. The default Admin password is : 1111.

CAUTION: Don't delete the default Admin account before adding a new account. If deleting the default Admin before adding at least one Admin account, you can't access the Menu to set up the system.

NOTE: Superuser can use all functions but can't access the Menu and Record to change the settings. User can use PTZ and Pause buttons only.

CONFIGURATION

CONFIGURATION – DVR SYSTEM

You can save configurations in the DVR system or CD and load from DVR system or CD. Highlight the CONFIG in the main menu and press the enter button. The following screen will appear.

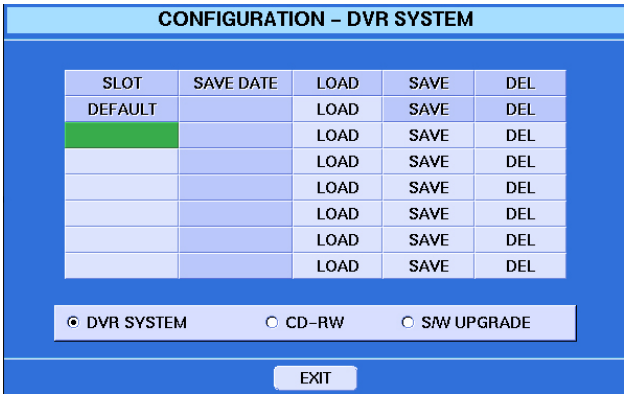


Figure 46 – CONFIGURATION.

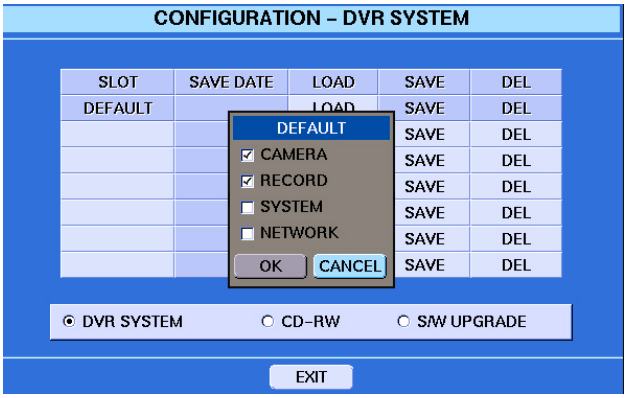


Figure 47 – CONFIGURATION(2).

SAVING CONFIGRUATION:

Select an empty box below SLOT and press the enter button. The virtual keyboard will appear and you can type the title. And, press the SAVE button. Then, the current configuration will be saved and the Save Date will be displayed.

DELETING CONFIGURATION:

Select one of saved configuration files and press the DEL button to delete it.

LOADING CONFIGURATION:

Select one of saved configuration files and press the LOAD button and you can select the configuration for Camera, Record, System and Network individually. Press the enter button after selecting the configuration that you want to load.

NOTE: The DEFAULT is the factory default and your DVR will be initialized to the factory default when loading the DEFAULT.

CONFIGURATION – CD-RW

Select the 2nd page, CD-RW. The below screen will appear.

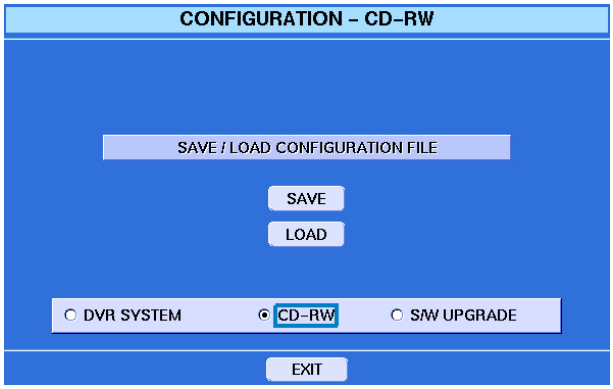


Figure 48 – CONFIGURATION -CD-RW.

You can save the current configuration to the CD or you can also load the saved configuration from the CD.

NOTE: You can apply the same configuration to other DVR systems by using this function.

CONFIGURATION – S/W UPGRADE

Select the 3rd page, S/W UPGRADE. The below screen will appear.

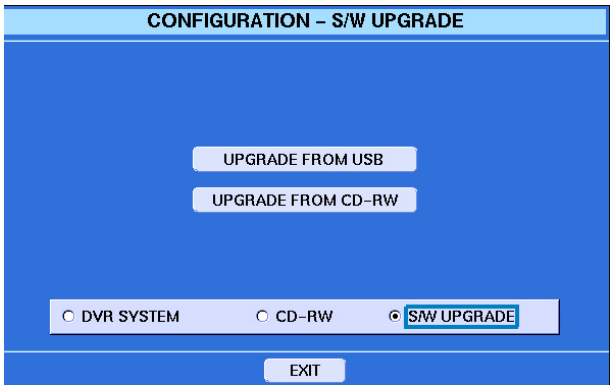


Figure 49 – CONFIGURATION - S/W UPGRADE.

You can upgrade the system from USB or CD-RW by selecting a button on the above screen.

NOTE: The system upgrade will take a few minutes. Please wait.

SHUTDOWN

You can restart or shutdown your DVR by highlight the SHUTDOWN in the Main menu and pressing the enter button. The following screen will appear.

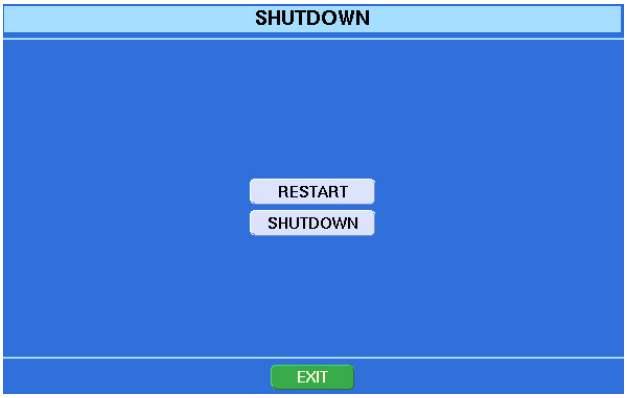


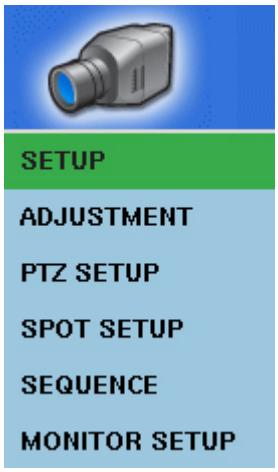
Figure 50 — SHUTDOWN.

Figure 51 – SHUTDOWN(2).

Select the RESTART in the SHUTDOWN menu and press the enter button. You will be asked to confirm restarting the system.

You can also shutdown the system by pressing the SHUTDOWN button.

6.2 Camera Setting



This is the menu for Camera Setup, PTZ setup, Spot Setup, Sequence and Monitor Setup.

SETUP

Highlight SETUP in the main menu and press the enter button. The SETUP screen appears.

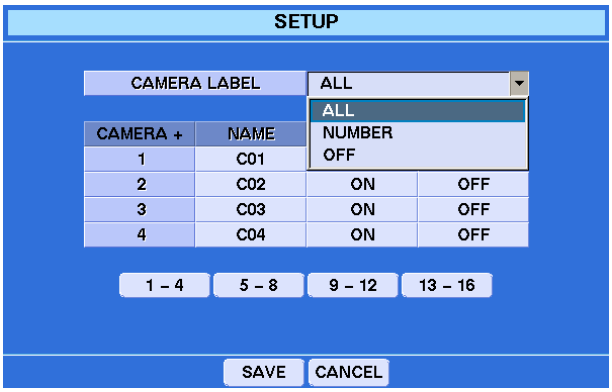


Figure 52 – SETUP

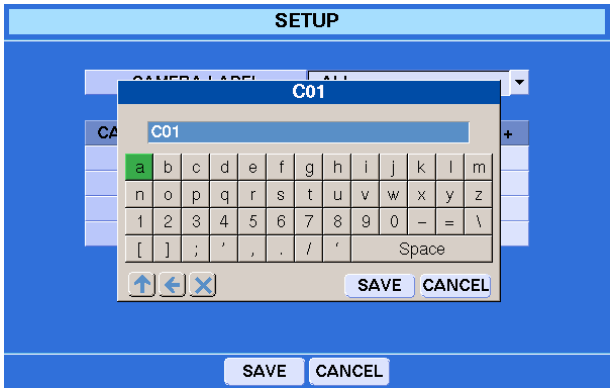


Figure 53 – SETUP (2)

The SETUP screen displays the camera label and the camera inputs in groups of four: 1-4, 5-8, 9-12 and 13-16.

You can display or hide the camera number and camera name by selecting ALL, NUMBER or OFF from a list on CAMERA LABEL.

You can assign names to each camera by highlighting the boxes below NAME and pressing the ENTER button. A virtual keyboard allows you to enter camera names. The camera name can be composed of 13 digits.

NOTE: When selecting the OFF, the DVR doesn't display the camera number and name.

You can connect or disconnect the video input by highlighting the boxes below INSTALL+ and pressing the ENTER button.

NOTE: The ENTER button allows you to select ON or OFF.

NOTE: When selecting OFF, the DVR disconnects the video source so the camera can't be displayed and recorded.

You can hide or display the video of the camera by highlighting the boxes below HIDDEN+ heading and pressing the ENTER button. Select ON or OFF by pressing the ENTER button.

You can save your changes by highlighting SAVE and pressing the ENTER button. Selecting CANCEL exits the screen without saving the changes.

ADJUSTMENT

Highlight ADJUSTMENT in the main menu and press the ENTER button. The ADJUSTMENT screen appears.

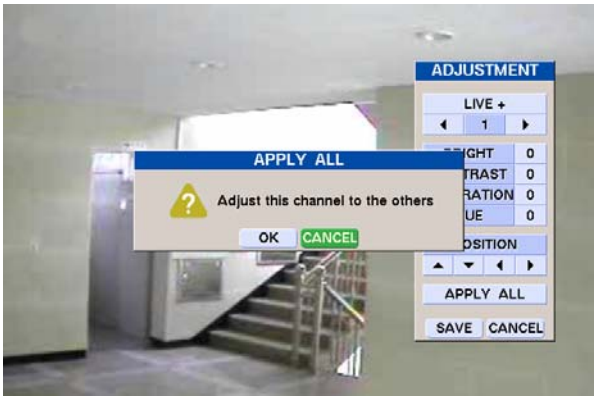


Figure 54 – ADJUSTMENT.

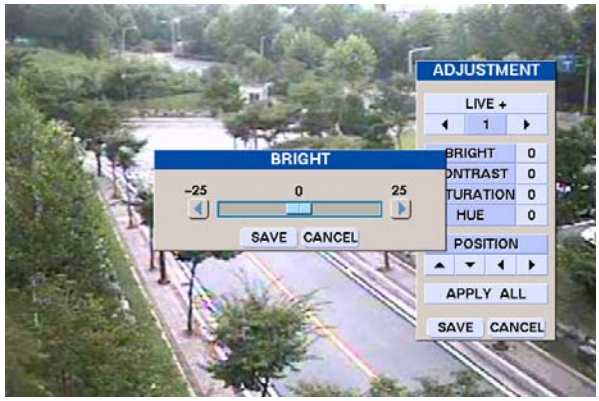


Figure 55 – ADJUSTMENT(2).

The ADJUSTMENT screen displays the brightness, contrast, saturation, hue and position.

You can select the live or recorded video by highlighting the box below LIVE+ and pressing the ENTER button. The channel can be selected by highlighting the arrow buttons, ◄ or ►and pressing the ENTER button.
You can adjust the brightness, contrast, saturation and hue by highlighting the headings.

NOTE: Highlight the SAVE button and press the ENTER button to save your changes in the sub-menu.

You can change the position of the screen by highlighting the arrow buttons of the POSITION and pressing the enter button.

You can apply your adjustments to all the channels by using the APPLY ALL button.

PTZ SETUP

Highlight PTZ SETUP in the main menu and press the enter button. The PTZ SETUP screen appears.

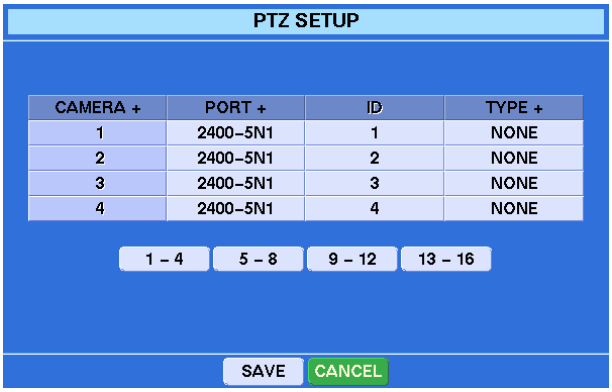


Figure 56 – PTZ SETUP.

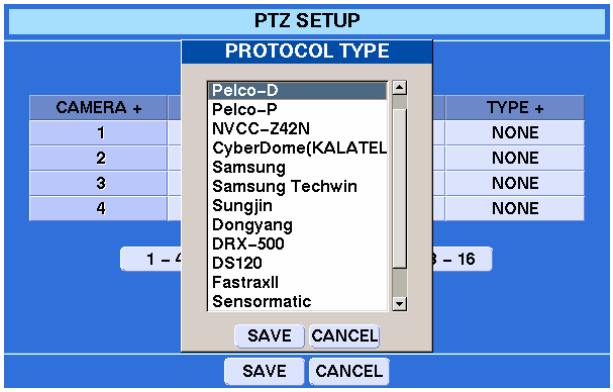


Figure 57 – PTZ SETUP(2).

The PTZ SETUP screen displays the camera inputs in groups of four: 1-4, 5-8, 9-12 and 13-16.

You can set up the baud rate, data bit, parity and stop bit by highlighting the boxes below PORT+ and press the enter button.

You can set up IDs for each channel on the ID heading.

NOTE: The IDs must be matched with PTZ units to control the PTZ units.

Selecting the TYPE+ causes a list of controllable cameras to display. Select your camera from the list and press the enter button.

You have to connect the camera to the RS485 terminal on the back of the DVR by following the camera manufacturer's instructions.

SPOT SETUP

Your DVR can set up 3 spot monitors and assign cameras to each spot. Highlight the SPOT SETUP in the main menu and press the enter button. The following SPOT SETUP screen will appear.

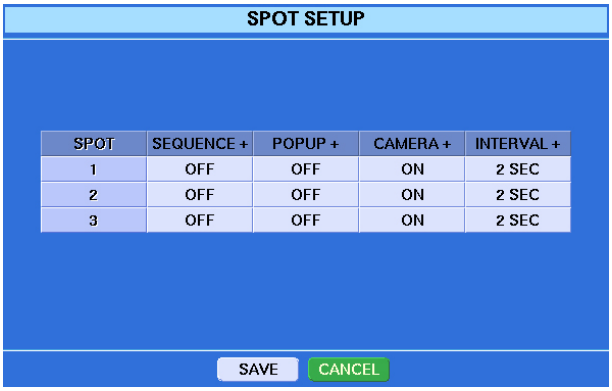


Figure 58 – SPOT SETUP.

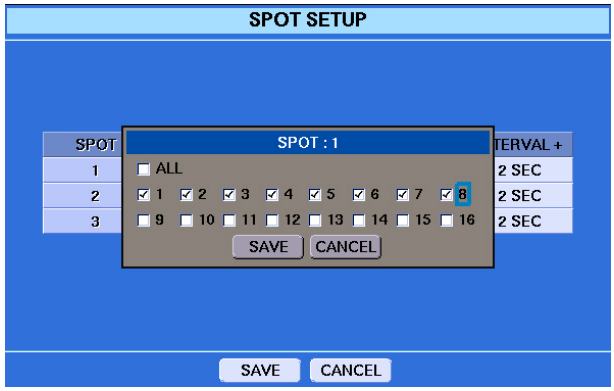


Figure 59 – SPOT SETUP(2).

You can turn on or off the Rotation for the assigned cameras for each spot. Turn on or off the ROTATE by highlighting the box below ROTATE and pressing the enter button.

You can assign cameras to each spot by highlighting the box below CAMERA+ and press the enter button. You can select cameras by checking the camera numbers on the popup screen. Refer to the Figure 59 – SPOT SETUP(2).

You can set up the rotating dwell time by highlighting the box below INTERVAL+ and pressing the enter button. It can be set up to 256 seconds.

When turning on Popup, channels that are having events will be popped up to the assigned spot monitor.

NOTE: Same cameras can't be shown on the spot monitors at the same time. When selecting ROTATE-ON and all cameras for all of 3 spots, the spot 1 will display camera number 1, spot 2 – camera number 2 and spot 3 – camera number 3. When selecting ROTATE – ON, all cameras for all of 3 spots will be affected by the different time interval in rotating the cameras.

SEQUENCE

You can set up the dwell time and the sequence for rotation. Select the SCREEN ROTATE in the main menu and press the enter button. The following screen will appear.

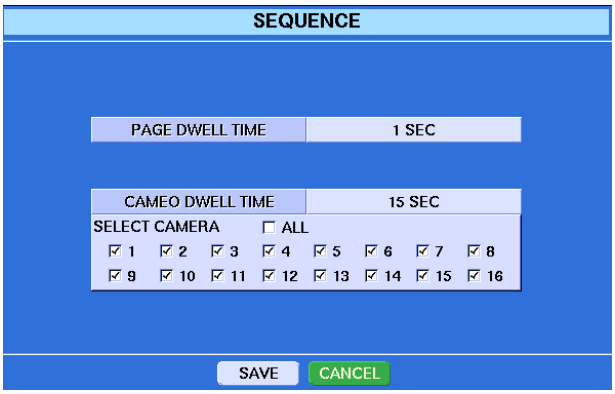


Figure 60 – SEQUENCE.

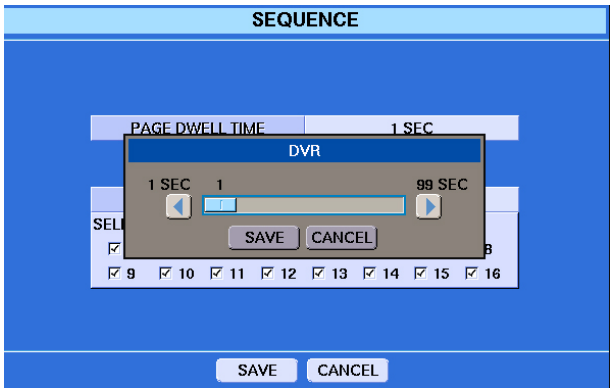


Figure 61 – SEQUENCE(2).

The page dwell time is for page sequence in case of 4 or 9 split screens.

You can select cameras for cameo sequence and set up the dwell time.

NOTE: The cameo sequence means rotating the selected cameras on a camera channel of split screens. The cameras being displayed on the other channels will not be rotated on the cameo sequence channel.

MONITOR SETUP

Select the MONITOR SETUP in the main menu and press the enter button. The Monitor Setup screen will be displayed.

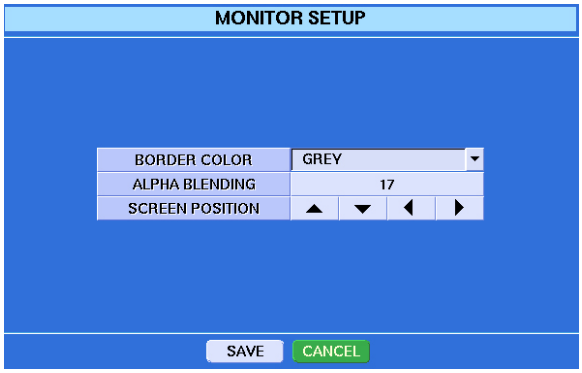
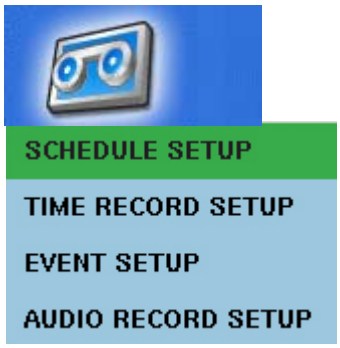


Figure 62 – MONITOR SETUP.

You can adjust the transparency of the menu screen by highlighting the box beside ALPHA BLENDING and selecting a number on the pop-up menu.

You can change the screen and GUI (Graphic User Interface) positions by clicking the ▲, ▼, ◀ or ▶ buttons.

6.3 Record Setting



Configuring Recording Settings

Your DVR offers a variety of flexible recording modes. You can set it up to record all the time or to record events only. It can be set up to continue recording once the hard disk drive is full by recording over the oldest video, or you can set it up alert you when the hard disk is full and stop recording.

SCHEDULE SETUP

Highlight SCHEDULE SETUP in the main menu and press the enter button. The SCHEDULE SETUP screen appears.

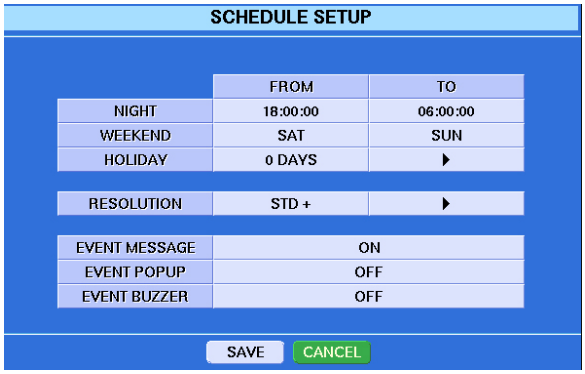


Figure 63 – SCHEDULE SETUP.

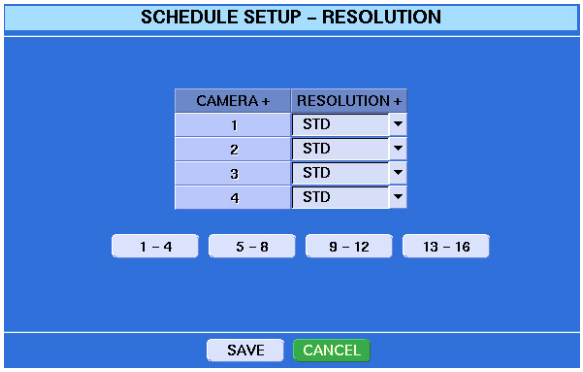


Figure 64 – SCHEDULE SETUP – RESOLUTION.

You can set up the night time period by highlighting the boxes beside NIGHT and pressing the enter button.

NOTE: The day time period is changed automatically, according to the setting of the night time.

You can set up weekend by pressing the boxes beside WEEKEND and add or delete holidays in the HOLIDAY SETUP menu by highlighting the ▶button in the HOLIDAY heading and pressing the enter button.

You can select the resolution between standard, high and highest by highlighting the box beside RESOLUTION and pressing the enter button.
If you want to change the resolution of certain cameras, press the ▶button in the RESOLUTION heading.

CAUTION: Your changes in the main SETUP screens are applied to every channels. If you want to change certain details, enter into the sub-menu by highlighting the detail(▶) button and pressing the enter button.

NOTE: Whenever changing the resolution, it affects the recording speed on Time Record Setup.

You can turn on or off the EVENT MESSAGE on the screen, EVENT POPUP to full screen and EVENT BUZZER.

NOTE: When turning off the EVENT MESSAGE, your DVR doesn't display the characters of events. (Motion → "M", Video Loss → "V", Alarm → "A")

NOTE: When turning on the EVENT POPUP, the event screen will be popped up to the full screen whenever being triggered.

TIME RECORD SETUP

Highlight TIME RECORD SETUP in the main menu and press the enter button. The TIME RECORD SETUP screen will be displayed.

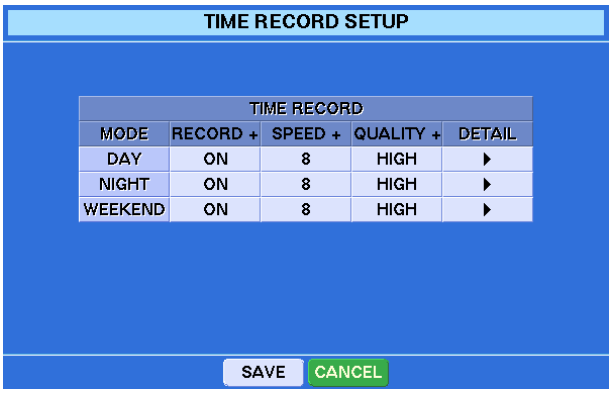


Figure 65 – TIME RECORD SETUP.

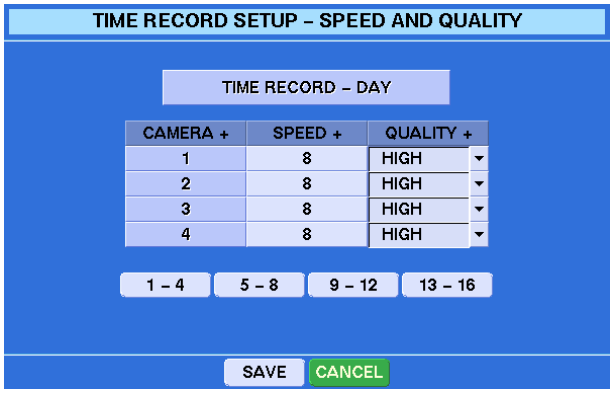


Figure 66 – TIME RECORD SETUP – SPEED AND QUALITY.

The TIME RECORD SETUP screen displays recording settings for Day, Night and Weekend.

Highlight the RECORD+ heading for DAY, NIGHT, or WEEKEND and press the enter button to toggle between ON and OFF.

You can set up the recording speed and select the recording quality between LOW, NORMAL, HIGH and HIGHEST.

NOTE: To select the recording speed, use the ▲ or ▼ buttons in the sub-menu.

You can change the certain details by highlighting the DETAIL(▶) button and pressing the enter button.

EVENT SETUP

EVENT INPUT

Highlight EVENT SETUP in the main menu and press the enter button. The EVENT SETUP screen appears.

The DVR can be set to react to events differently. Each sensor can be assigned to a camera with different recording speed, video quality and dwell time.

Figure 67 – EVENT SETUP.

Highlight the INPUT, MOTION or VIDEO LOSS in the EVENT INPUT menu and press the enter button to toggle between ON and OFF.

NOTE: When turning off the input, you can't select event inputs, MOTION, ALARM IN or VIDEO LOSS.

Highlight the ▶button in the EVENT INPUT menu to change the details for certain cameras. The following EVENT SETUP – INPUT screen will appear.

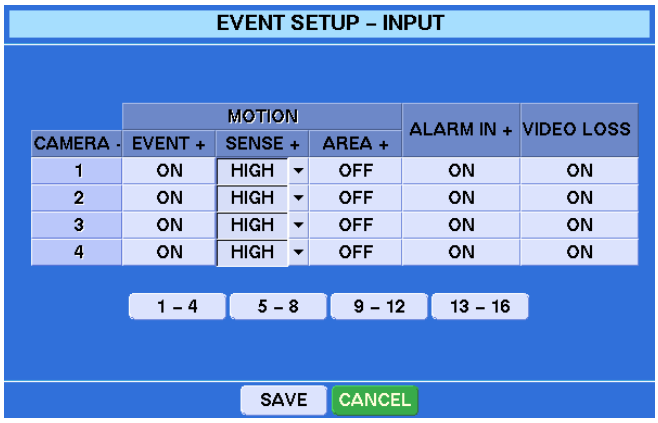


Figure 68 – EVENT SETUP – INPUT.

MOTION SETUP

You can turn on or off motion events for each camera by toggling On and Off at box below EVENT+. Your DVR has 5 levels of sensitivity for motion and you can assign the sensitivity level by pressing the box below SENSE+. The motion detection area can be set by pressing the box below AREA+. The following motion detection area setup screen will appear.

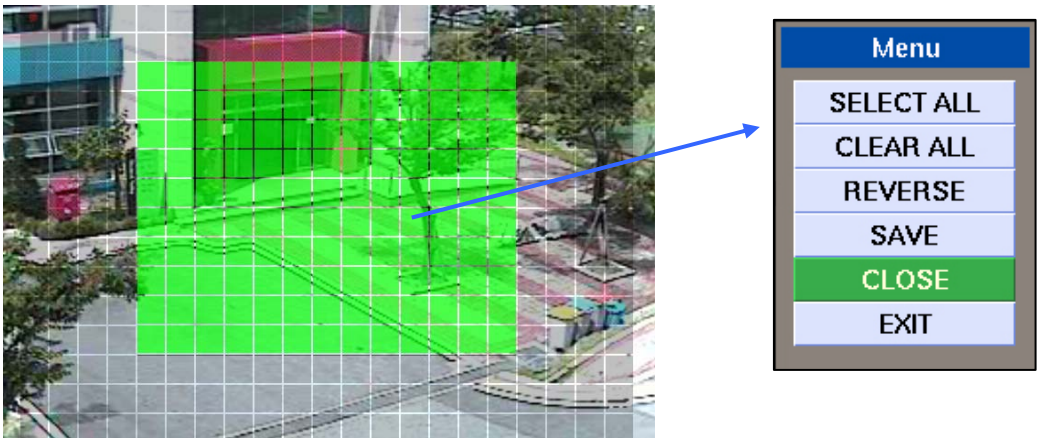


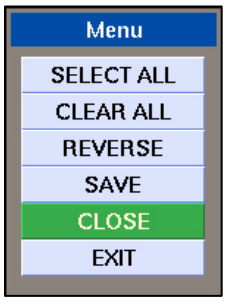
Figure 69 – MOTION DETECTION AREA.

When getting into the motion detection area screen, a Blue dot pointer will be displayed on the grid at the very top-left part. If pressing the enter, the dot will turn to Red color and it will arrow to select grids and set up the motion area by pressing Up, Down, Left and Right cursor buttons on the front panel or remote.

NOTE: When the dot color is Blue, you can move that pointer by pressing the arrow buttons without selecting the grids.

NOTE: When the dot color is Red, you can select the grids or erase the selected grids by pressing the arrow buttons.

When pressing MENU button on the front panel or remote in the Motion Detection Area, the below pop-up menu will be displayed.



You can select all grids by pressing SELECT ALL or clear selected grids by pressing CLEAR ALL. When pressing Reverse, the selected grids will be cleared and unselected grids will be selected.
You can save the selected area, close the above pop-up menu or exit from the Motion Detection Area Setup Menu from the above pop-up menu.

ALARM IN SETUP

Highlight the box below ALARM IN+ for a channel that you want to set up and press the enter button. The following ALARM IN screen will appear.

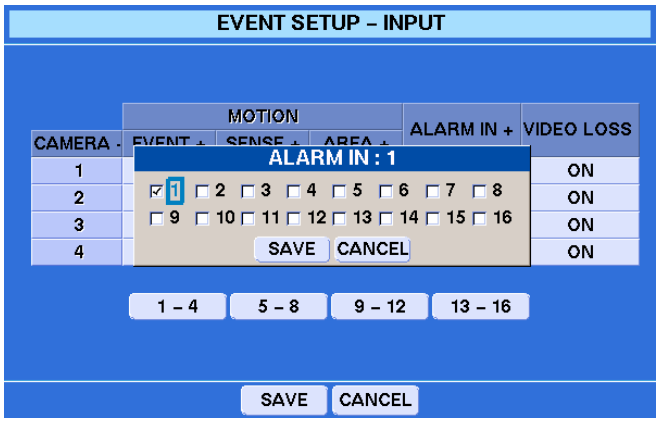


Figure 70 – EVENT SETUP – INPUT - ALARM IN.

You can select Alarm Inputs which will be associated with the camera. When having alarm from the associated Alarm Inputs, the Event actions associated with the camera will be triggered. Also, if turning on Record in EVENT OUTPUT menu, the associated events will be recorded when alarm is activated.

VIDEO LOSS SETUP

Highlight the box below VIDEO LOSS+ for a channel that you want to set up and press the enter button. The following VIDEO LOSS screen will appear.

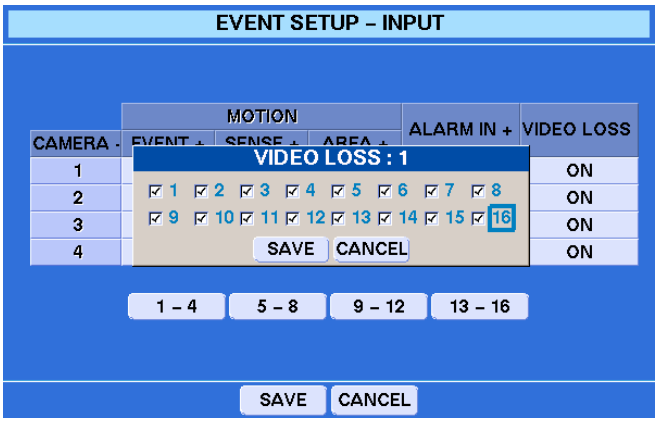


Figure 71 – EVENT SETUP – INPUT - VIDEO LOSS.

You can select a single or multiple VIDEO LOSS camera channels which will be associated with the camera. When having Video Loss from the associated Video Loss camera channels, the Event actions associated with the camera will be triggered. Also, if Record in EVENT OUTPUT menu is on, the associated events will be recorded.

EVENT OUTPUT

EVENT RECORD SETUP

You can select the RECORD ON/OFF, SPEED, QUALITY or POST RECORDING dwell time in the EVENT OUTPUT menu by highlighting the below boxes and press the enter button.

NOTE: The recording speed in the EVENT OUTPUT menu will be associated with the resolution setting in the SCHEDULE SETUP menu. When selecting the STD resolution in the SCHEDULE SETUP menu, the maximum speed will be 15fps. In case of selecting HIGH resolution, the maximum speed will be 8fps.

You can select the quality by toggling between LOW, NORMAL, HIGH and HIGHEST and this selection is not related to the recording frame per seconds. When selecting Highest, it gives better image quality but the file size will be bigger than LOW, NORMAL or HIGH.

You can set up the Post Recording time up to 100 seconds by highlighting the below box and pressing the enter button.

Highlight the ▶button and pressing the enter button to change the details in the sub-menu. The following screen will appear.

Figure 72 – EVENT SETUP – RECORD.

Figure 73 – EVENT SETUP-RECORD-SPEED AND QUALITY.

You can turn on or off the recording and change the speed and image quality for Day, Night and Weekend. Also, you can change the settings for certain cameras in the sub-menu by highlighting the ▶button and pressing the enter button.

EVENT ACTION SETUP

You can set up event actions by toggling between ON and OFF for Alarm, Image or Preset and you can also set up the alarm dwell time by highlighting the DISPLAY button and press the enter button.

Highlight the ▶button and press the enter button to change certain details in the sub-menu. The following EVENT SETUP-ACTION screen appears.

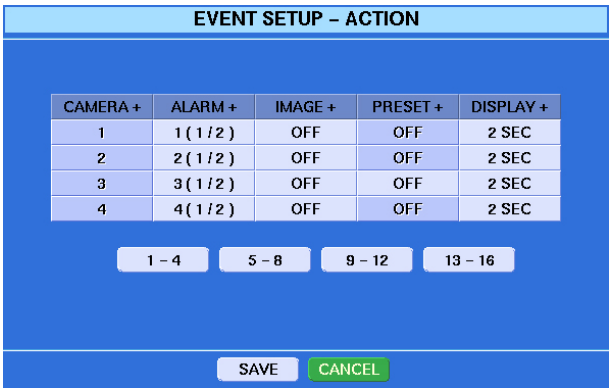


Figure 74 – EVENT SETUP-ACTION.

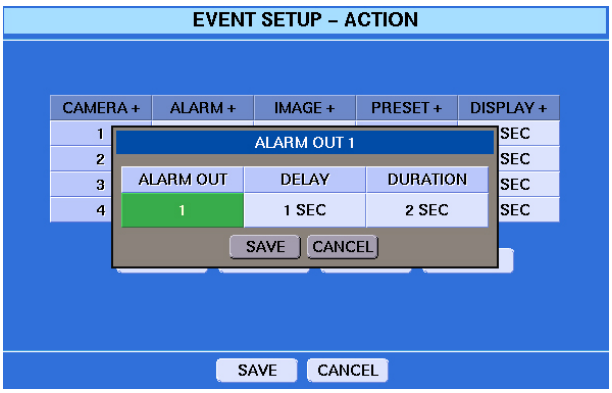


Figure 75 – EVENT SETUP-ACTION(2).

You can turn on or off Alarm, Image or Preset for all the channels at the same time by highlighting the headings, ALARM+, IMAGE+ or PRESET+ and pressing the enter button.

You can associate the Alarm Out, Alarm Delay and Dwell time for each camera.

You can also associate presets for installed PTZ cameras and set up the dwell time up to 100 seconds by highlighting the DISPLAY+ and pressing the enter button.

NOTE: When turning on the IMAGE, your DVR will send the event images to the client software (SMS: Server Management Software).

AUDIO RECORD SETUP

Highlight the AUDIO RECORD SETUP in he main menu and press the enter button. The AUDIO RECORD SETUP screen appears.

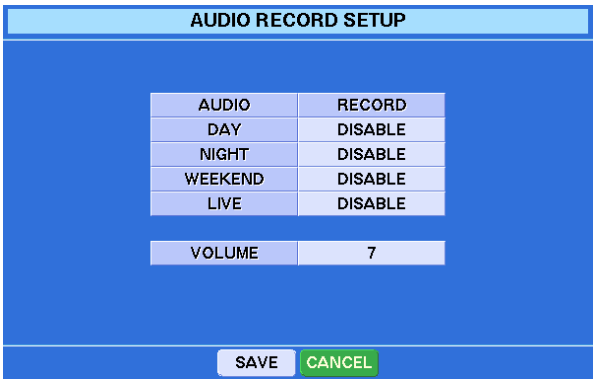


Figure 76 – AUDIO RECORD SETUP.

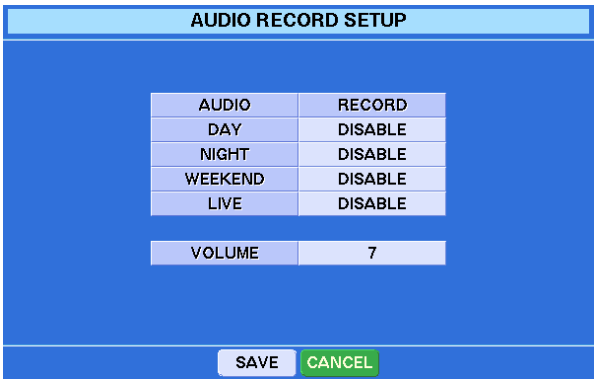
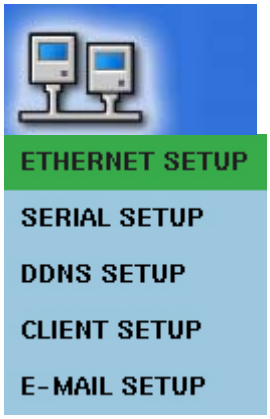


Figure 77 – AUDIO RECORD SETUP(2).

You can turn on or off live audio or audio recording by highlighting the boxes beside DAY, NIGHT, WEEKEND or LIVE and pressing the boxes.

You can also control the volume.

6.4 Network Setting



Configuring Network Settings

Control communication related setting from DVR.
It does not only set for commonly using Ethernet and PSTN, but also monitors the status of server from a remote site through the Client and E-mail setting.

ETHERNET SETUP

You can turn on or off the dynamic IP by highlighting the box beside the DYNAMIC IP and pressing the enter button.

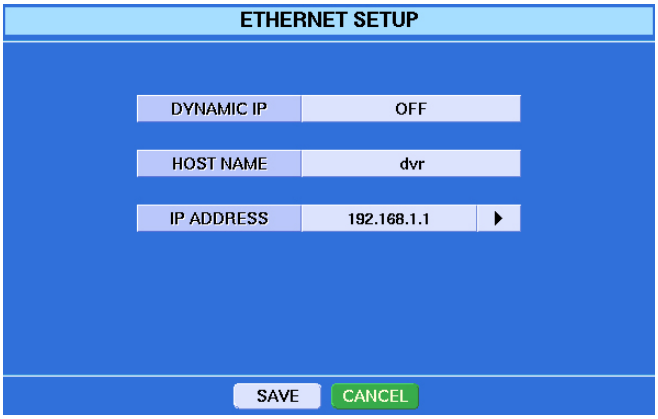


Figure 78 – ETHERNET SETUP.

When turning off the Dynamic IP, you can enter the static IP information by highlighting the sub-menu button(▶) and pressing the enter button. Refer to the screen below.

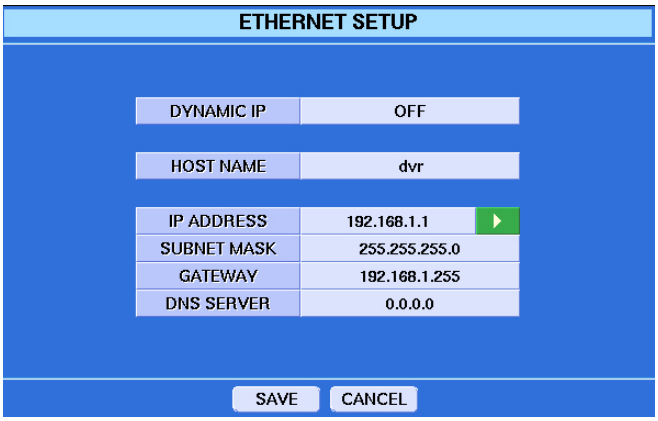


Figure 79 – ETHERNET SETUP(2).

Enter the host name to the box beside HOST NAME by highlighting the box and pressing the enter button. The virtual keyboard will appear for typing.

You can save your changes and return to the main menu by highlighting SAVE and pressing the button. Selecting CANCEL exits the screen without saving the changes.

SERIAL SETUP

Select the SERIAL SETUP in the main menu and press the enter button. The SERIAL SETUP screen appears.

RS-232 SETUP

When pressing the down list menu button (▼) on the RS-232 SETUP, it will show NONE, MODEM, EXTERNAL CONTROLLER and TEXT-IN. Then, please select a proper RS-232 serial communication device that you want to use.

You can connect the RS-232 devices like external modem, external keyboard controller or POS (Point Of Sale) device to the RS-232 terminal on the back of the DVR by following the modem, keyboard or POS manufacturer's instructions.

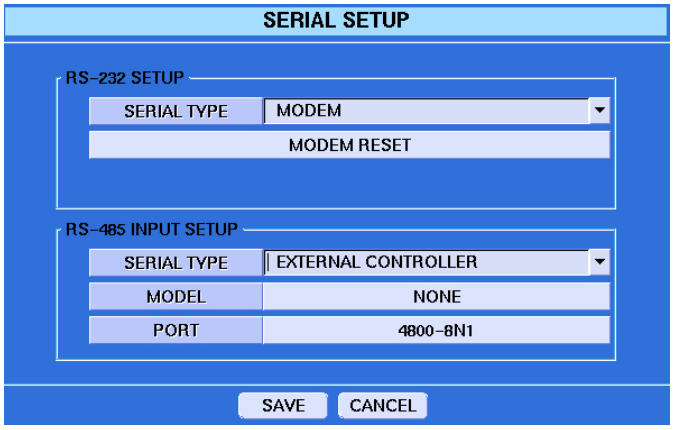


Figure 80 – SERIAL SETUP.

You can connect the external modem to the RS232 terminal on the back of the DVR following the modem manufacturer's instructions. Reset the external modem and the modem will be activated.

When selecting External Controller or POS, your DVR will displays a list of controllable devices.

RS-485 INPUT SETUP

When pressing the down list menu button (▼) on the RS-485 INPUT SETUP, it will show NONE, EXTERNAL CONTROLLER and TEXT-IN. Then, please select a proper RS-485 serial communication device that you want to use.

You can connect the RS-485 devices like external keyboard controller or POS (Point Of Sale) device to the RS-485 terminal on the back of the DVR by following the keyboard or POS manufacturer's instructions.

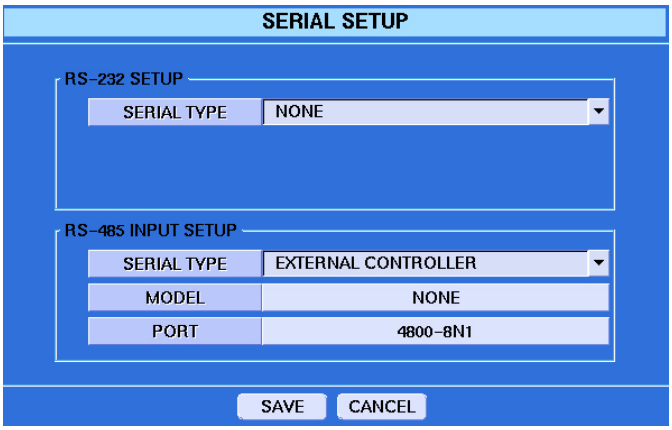


Figure 81 – SERIAL SETUP(2).

You can connect the external modem to the RS232 terminal on the back of the DVR following the modem manufacturer's instructions. Reset the external modem and the modem will be activated.

When selecting External Controller or POS, your DVR will display a list of controllable devices.

CLIENT SETUP

Highlight the CLIENT SETUP in the main menu and press the enter button. The following CLIENT SETUP – CONNECT screen will appear.

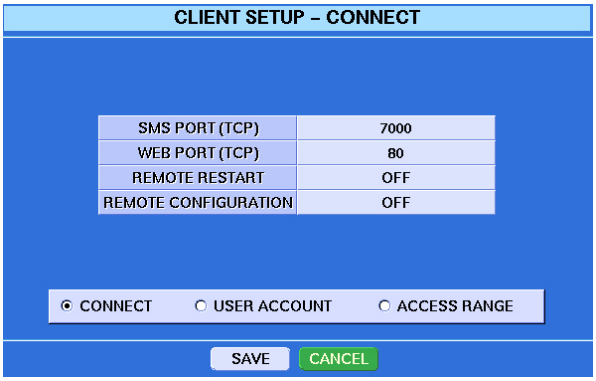


Figure 84 – CLIENT SETUP – CONNECT.

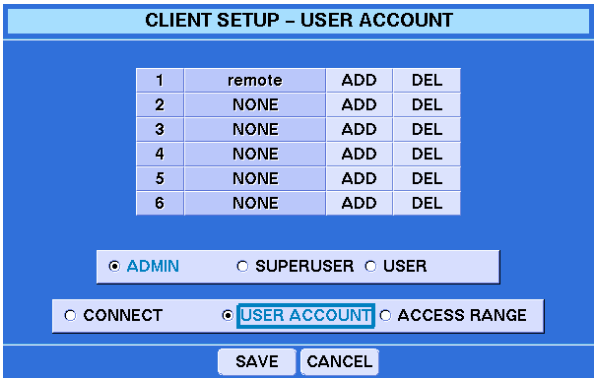


Figure 85 – CLIENT SETUP-USER ACCOUNT.

Enter the TCP Port for client connection. The default SMS port (TCP) is 7000 and 80 for Web Port (TCP).

You can select the remote restart or remote configuration by highlighting the side boxes and press the enter button.

Select the user account by highlighting the USER ACCOUNT and pressing the enter button. Refer to the Figure 83.

You can create new accounts by highlighting ADD button and pressing the enter button. Type the new account by using the virtual keyboard. When saving a new account, the password screen will appear. Type the password for the new account. The confirm screen will appear. Retype the password. Refer to the Figure 84 and 85.

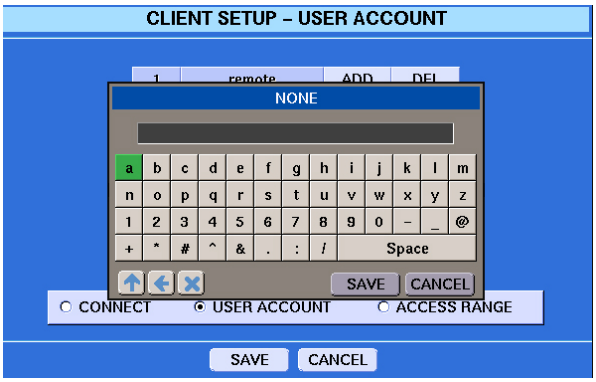


Figure 86 – CLIENT SETUP-USER ACCOUNT(2).

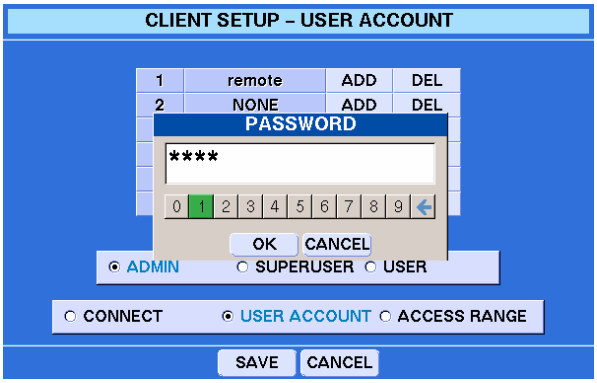


Figure 87-CLIENT SETUP-USER ACCOUNT(3).

Highlight the ACCESS RANGE in the CLIENT SETUP menu to define the IP access range to the client.

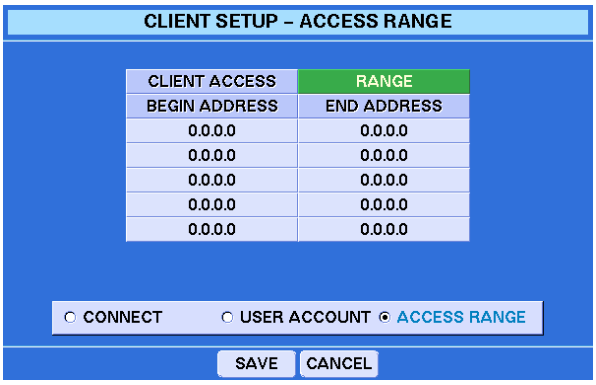


Figure 88 – CLIENT SETUP-ACCESS RANGE.

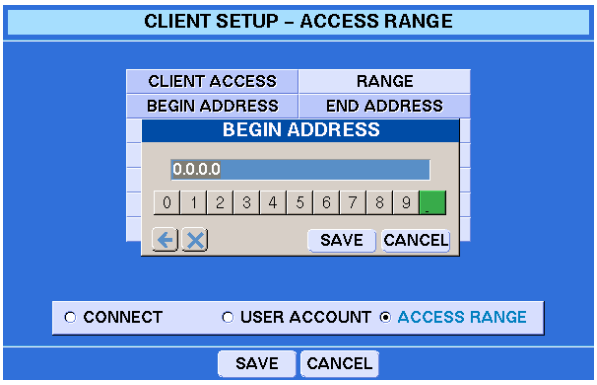


Figure 89 – CLIENT SETUP-ACCESS RANGE(2).

When an IP address is not in the access range, the IP address can't access the server and the default range is ALL.

NOTE: The default range, ALL is allowing any IP address to access the DVR.

E-MAIL SETUP

Your DVR can notify any event to assigned e-mail addresses and you can set up e-mail addresses up to 6.

Highlight the E-MAIL SETUP in the main menu and press the enter button. The following E-MAIL NOTIFICATION screen will appear.

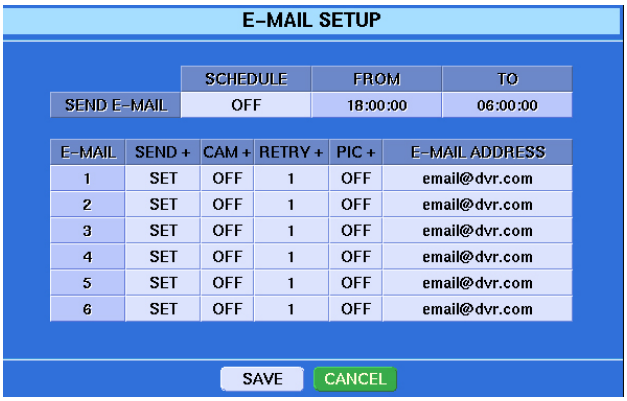


Figure 90 – E-MAIL SETUP(1).

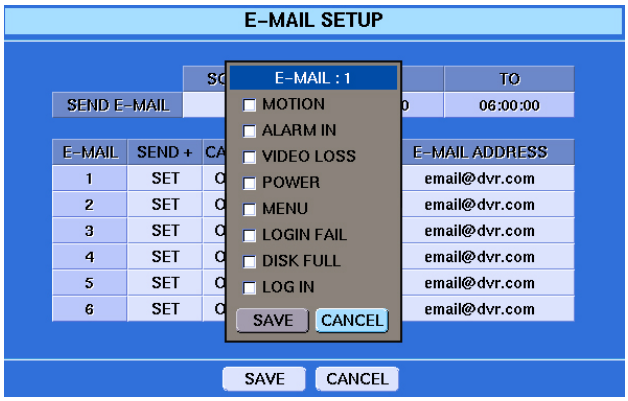


Figure 91 – E-MAIL SETUP(2).

You can associate events for the e-mail notification. Highlight the box below SEND+ and press the enter button. The event list will appear. Refer to the Figure 89. Also, you can select cameras for emailing as in Figure 90. Your DVR will notify events for the selected cameras only.

You can set up the trial time for e-mailing.

You can type the e-mail addresses you want to assign by using the virtual keyboard. Refer to the Figure 91 below.

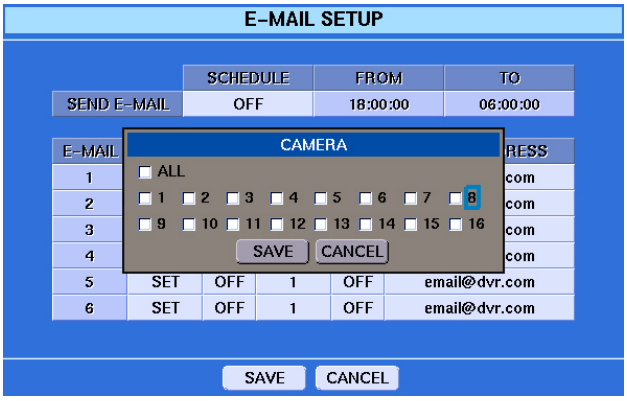


Figure 92 – E-MAIL SETUP(3).

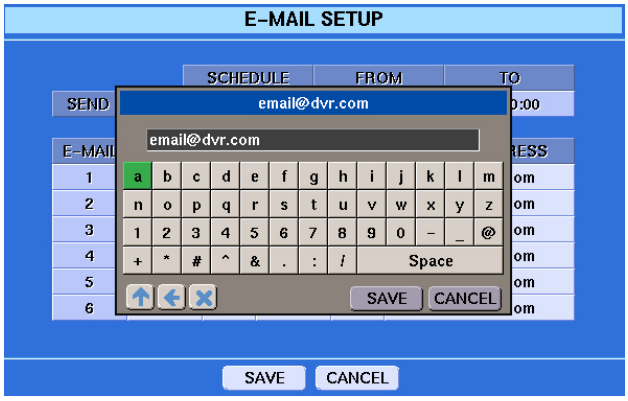


Figure 93 – E-MAIL SETUP(4).

6.5 SYSTEM INFORMATION

Checking System Information

You can check the system log, status and version information.

SYSTEM LOG

You can check the system log by selecting the SYSTEM LOG in the main menu. The below screen will show up.

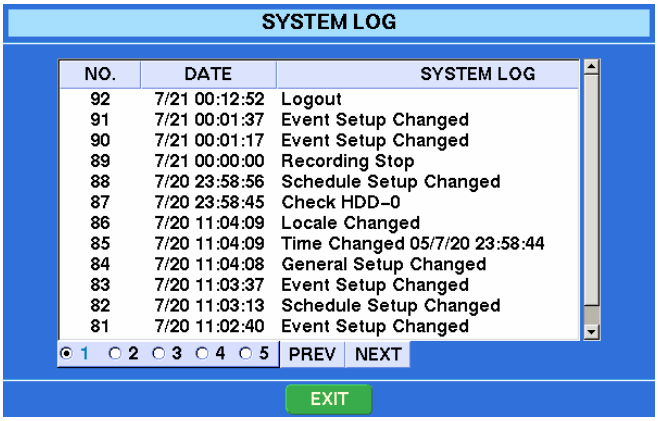

SYSTEM LOG
NO. DATE SYSTEM LOG
92 7/21 00:12:52 Logout
91 7/21 00:01:37 Event Setup Changed
90 7/21 00:01:17 Event Setup Changed
89 7/21 00:00:00 Recording Stop
88 7/20 23:58:56 Schedule Setup Changed
87 7/20 23:58:45 Check HDD-0
86 7/20 11:04:09 Locale Changed
85 7/20 11:04:09 Time Changed 05/7/20 23:58:44
84 7/20 11:04:08 General Setup Changed
83 7/20 11:03:37 Event Setup Changed
82 7/20 11:03:13 Schedule Setup Changed
81 7/20 11:02:40 Event Setup Changed
1 2 3 4 5
PREV
NEXT
EXIT

Figure 94 – SYSTEM LOG.

You can move to the previous page or next pages by pressing PREV or NEXT button in the SYSTEM LOG menu.

STATUS

You can check the status of the DVR by selecting STATUS from the Top Live Cameo Menu. The status screen displays Recording, Event, Network, Alarm, Disk and Key information.

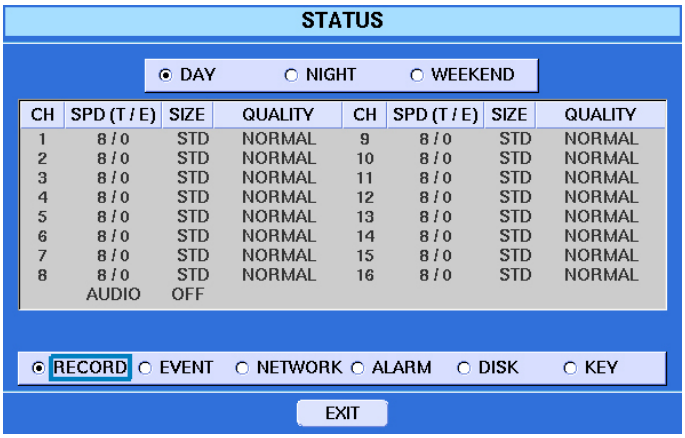

STATUS
DAY
NIGHT
WEEKEND
CH SPD (T / E) SIZE QUALITY CH SPD (T / E) SIZE QUALITY
1 8 / 0 STD NORMAL 9 8 / 0 STD NORMAL
2 8 / 0 STD NORMAL 10 8 / 0 STD NORMAL
3 8 / 0 STD NORMAL 11 8 / 0 STD NORMAL
4 8 / 0 STD NORMAL 12 8 / 0 STD NORMAL
5 8 / 0 STD NORMAL 13 8 / 0 STD NORMAL
6 8 / 0 STD NORMAL 14 8 / 0 STD NORMAL
7 8 / 0 STD NORMAL 15 8 / 0 STD NORMAL
8 8 / 0 STD NORMAL 16 8 / 0 STD NORMAL
AUDIO OFF
RECORD
EVENT
NETWORK
ALARM
DISK
KEY
EXIT

Figure 95 – STATUS.

VERSION

You can check the version of your DVR in the VERSION menu. Refer to the screen below. The VERSION screen will display the version information.

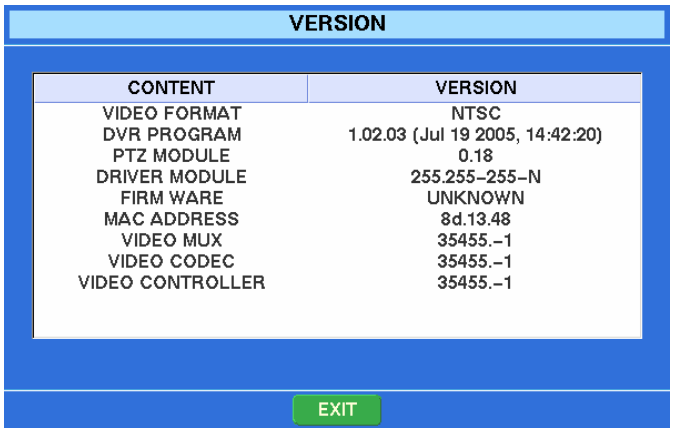


Figure 96 – VERSION.

Appendix A – Reviewing Backup (Clip) Images

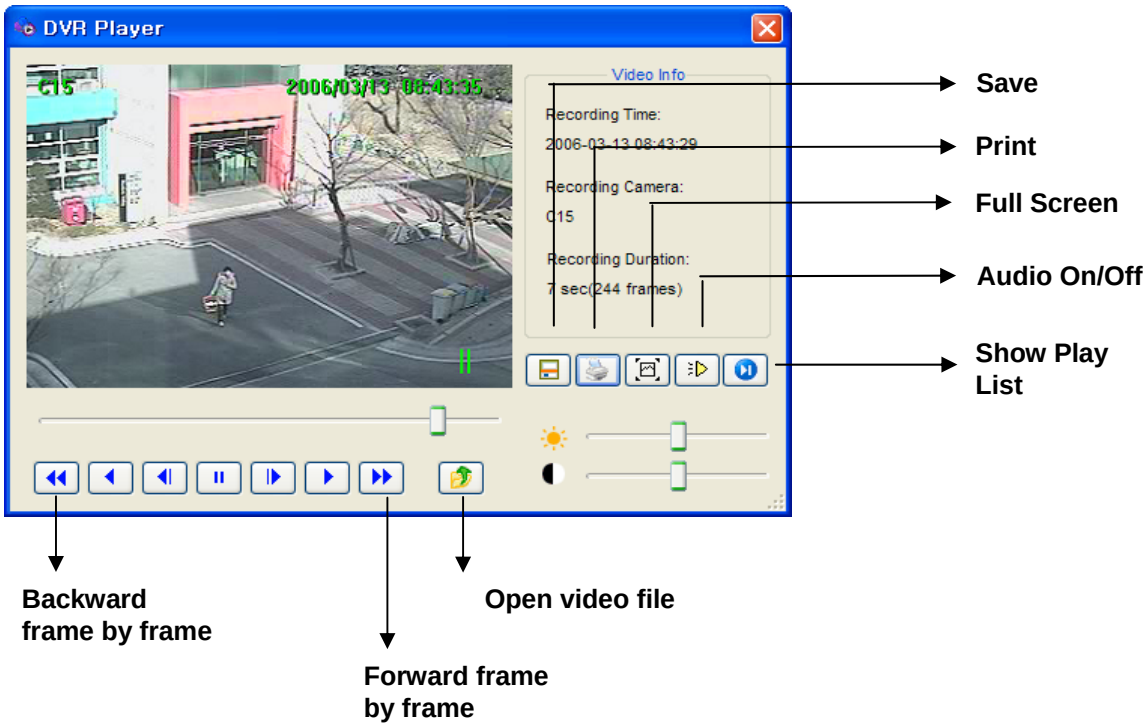


Figure 97 – DVR MINI PLAYER.

Your DVR will download the Mini Player with the backup files automatically. You can play the backup files with the DVR Mini Player on your PC and convert the files to .JPG or .AVI format.

Appendix B – How to use the virtual keyboard

Figure 98 – VIRTUAL KEYBOARD.

You will be using the virtual keyboard when setting up the DVR. Highlight the button and press the enter button to enter.
The ↑ button will switch the page to the 2nd page showing Capital letters, the ← button is deleting and **X** button is clearing.

Appendix C – Using Hot Keys

Smart Playback:

Press the down arrow button (▼) when playing back video. In the Smart Playback mode, your DVR will play back the recorded video that has motions only.

Panorama Playback:

Press the UP arrow button (▲) in a single channel playback.

NOTE: The Panorama playback can be entered in single channel screen only. You can change the screen to 2x2, 3x3, 4x4 formats by pressing the Display button in the Panorama mode.

Audio Playback:

Press the Log-out button when playing back video that has recorded audio. The audio control menu will be displayed.

Cut & Save:

BACKUP → BACKUP → BACKUP. You can set up the start time by pressing the Backup button first time and set up the end time by pressing the Backup button again. Press the Backup button once more. Then, Backup menu screen will be displayed.

Go to Time Search:

Press the SEARCH button while playing back.

Appendix D - Troubleshooting

Problem	Possible Solution
No Power	• Check power cord connections. • Check power at the outlet.
No Live Video	• Check camera video cable and connections. • Check monitor video cable and connections. • Check camera power. • Check camera lens settings.
Live Video Too Bright	If a cable is attached to the “Loop” connector, make sure that it is properly terminated.
Mouse is not working	Press the FREEZE to reset the mouse.
DVR has stopped recording	If hard disk is full, you will either need to delete video or set the DVR to the Overwrite Mode.

Appendix E – Specifications for 8, 16 CH

Video	Inputs	• 8, or 16 CH composite videos
	Outputs	• CCTV Monitor (NTSC/PAL), • CRT(VGA) Monitor
		• 3 Spot CCTV Monitors (NTSC/PAL) / 8ch – 1 Spot
Monitoring	Display	• NTSC : 480fps (8ch: 240fps) • PAL : 400fps (8ch: 200fps)
	Screen split	• Various Multi-view Screens
Recording	Performance	• NTSC: CIF(240fps), HVGA(120fps), VGA(60fps) • PAL: CIF(200fps), HVGA(100fps), VGA(50fps)
	Resolution	• NTSC : CIF(336x224), HVGA(672x224), VGA(672x448) • PAL :CIF(336x272), HVGA(672x272), VGA(672x544)
	Compression	• Enhanced MPEG-4
	Mode	• Motion detection, Sensor, Schedule • Variable compression rates, recording frame, motion sensitivity
Recording	Storage media	• Internal 4 x HDD **(Option)** • Built-in DVD R/W
	Audio	• 1 Channel, G.723 Compression
Playback	Mode	• Multi-channel playback (Max 16ch), Simultaneous playback, Panorama playback
	Searching	• By Channel, Time, Date, Motion detection, Sensor events
Remote Monitoring S/W		• Server Management Software **(SMS)**
Alarm/Sensor		• 16, 8ch(1/8)
Camera Control		• Pan/Tilt, Zoom, Focus, Iris
Back-up		• Through External Ports (SCSI HDD, CD-W, USB), Remote S/W
Hardware Spec.	Size (mm)	• 350(W) x 400(D) x 88(H) : 2U Rack Mount Kit
	Weight	• 8kg
	Power	• Max. 60W, 90~264(47Hz~63Hz)

Appendix E – Specifications for 4CH

Video	Inputs	• 4 CH composite videos
	Outputs	• CCTV Monitor (NTSC/PAL), • CRT(VGA) Monitor
		• 1 Spot CCTV Monitor (NTSC/PAL) / 4ch – 1 Spot
Monitoring	Display	• NTSC : 120fps • PAL : 100fps
	Screen split	• Various Multi-view Screens
Recording	Performance	• NTSC: HVGA(120fps), VGA(60fps) • PAL: HVGA(100fps), VGA(50fps)
	Resolution	• NTSC : CIF(336x224), HVGA(672x224), VGA(672x448) • PAL :CIF(336x272), HVGA(672x272), VGA(672x544)
	Compression	• Enhanced MPEG-4
	Mode	• Motion detection, Sensor, Schedule • Variable compression rates, recording frame, motion sensitivity
Recording	Storage media	• Built-in HDD Rack
	Audio	• 1 Channel, G.723 Compression
Playback	Mode	• Multi-channel playback (Max 4ch), Simultaneous playback, Panorama playback
	Searching	• By Channel, Time, Date, Motion detection, Sensor events
Remote Monitoring S/W		• Server Management Software **(SMS)**
Alarm/Sensor		• 1/4
Camera Control		• Pan/Tilt, Zoom, Focus, Iris
Back-up		• Through External Ports (SCSI HDD, CD-W, USB), Remote S/W
Hardware Spec.	Size (mm)	• 350(W) x 260(D) x 68(H)
	Weight	• Max. 3.5kg without HDD
	Power	• Max. 60W, 90~264(54Hz~65Hz)

Appendix F – DVR FAQ

General

Q. What does Embedded Linux mean?
A. Embedded Linux means that the operating system of the DVR has been implanted into the CPU (Central Processing Unit). This means that the system response time is faster, more stable, and that the core of the DVR is never affected by external factors, such as virus, hacking, and system failure due to hard drive abnormalities.

Q. Is the DVR up-gradable by CD or network ?
A. Yes.
Q. How can I reset DVR to the factory default setting?
A. Load the factory default setting from CONFIG menu.

Live Monitoring

Q. Is it possible to have Live screen monitoring with specific cameras?
A You can set the camera sequence through CAMEO swap.

Recording

Q. How do you record?
A. Using the Time Record and Event Record from RECORD menu, or Default Record button allows you to record.
Q. What is Time Recording?
A. It is recording that is not related to event recording.
Q. What does that Event mean?
A. That means Motion, Alarm In, Video-loss event activity.
Q. What is Event Recording?
A. It only records when the event occurs.

Searching & Playing Video

Q. How to playback the video?
A. Search time and event to playback from Search menu.
Q. Is it possible to view Live screen during the playback?
A. It is possible to see using Live Cam Change from CAMEO Menu during the playback.
Q. Is it possible to copy the wanted section of video during the playback?
A. Yes, select starting and ending time with Spot key, then using the Backup key to save.

Backup

Q. Is it possible to backup to DVD media?
A. Yes, if you have DVD-RW installed in your DVR.
Q. Can USB memory stick be used?
A. Yes.

Network

Q. Does it support dynamic IP?
A. Yes. Turn on the Dynamic IP from Ethernet Setup allows you to use it.
Q. Mail is not sent out.
A. Please check all the setting in Ethernet Setup.

Miscellaneous

Q. Is it possible to use either mouse, joystick or keyboard through the USB port?
A. Mouse inputs device and memory sticks are supported as the primary device.
Q. What types of cameras can be used?
A. NTSC or PAL system cameras are OK to use.

Appendix G – PSTN Modem Setting

Follow the Steps :

1. Control Panel → Network Connection → Create New Connection

2. Select the Internet Connection for Networking

3. Select the manual connection while in preparation. Click **Next** button

4. Select telephone MODEM for the Internet connection. Click **Next** button

5. Name setting for the connection. Click **Next** button

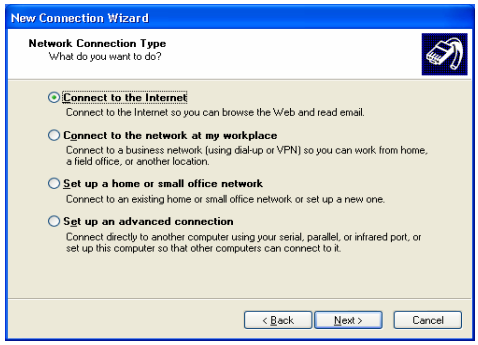

New Connection Wizard
Network Connection Type
What do you want to do?
Connect to the Internet
Connect to the Internet so you can browse the Web and read email.
Connect to the network at my workplace
Connect to a business network (using dial-up or VPN) so you can work from home, a field office, or another location.
Set up a home or small office network
Connect to an existing home or small office network or set up a new one.
Set up an advanced connection
Connect directly to another computer using your serial, parallel, or infrared port, or set up this computer so that other computers can connect to it.
< Back
Next >
Cancel

Figure 99 .Step 1 ~ 8

6. Enter telephone number connected to DVR. Click **Next** button

7. User ID is ppp and no password for the Internet account user. The following option can be set with your own discretion. Click **Next** button

8. Connection Wizard completes. Click **Finish** button

9. Click the short cut DVR of desktop.
Do not save User ID and Password for other user.
Enter the password (**pppsetup**) on each connection.

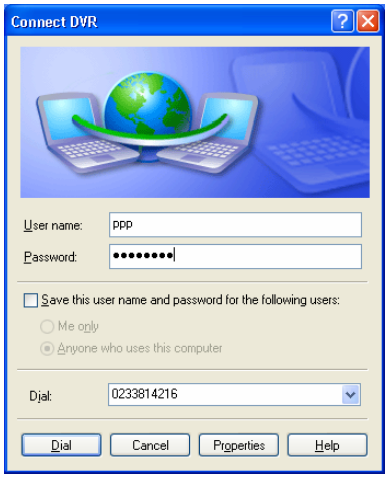


Figure 100. Step 9 ~ 12

10. Set Run Script to "**Generic Login**" in Security Tab in DVR Property

11. After step 10, type in **ID : ppp/ Password : pppsetup** to connect to DVR. If you set Modem's setting correctly and get only dialing tone then you will see the following picture. The DVR is receive-mode now.

12. Check if connection to DVR is ok

※ Windows Styles or looks may look different from the picture above due to the different OS versions.